A TREATISE

ON

INDIGESTION.

WITH

OBSERVATIONS

ON

SOME PAINFUL COMPLAINTS ORIGINATING IN INDIGESTION, AS TIC DOULOUREUX, NERVOUS DISORDER, &c.

BY

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First American,

FROM THE LAST LONDON EDITION REVISED AND ENLARGED:

WITH

NOTES; AND AN APPENDIX,

Containing Observations relative to the mode of treating Dyspepsia lately adopted and recommended by Dr Avery, Mr Halstead, and others;

BY AN AMERICAN PHYSICIAN.

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" He wanted no other recommendation for any one article of science, than the recommendation of evidence—and, with this recommendation, he opened to it the chamber of his mind, though authority scowled upon it, and taste was disgusted by it, and fashion was ashamed of it."

Dr Chalmers—On the Merits of Newton's Philosophy.

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PREFACE

TO

THE FIRST EDITION.

The liver is a gland of waste; the stomach and small intestines are organs of supply—(a supply of the most important and imperious nature): the former is an insensible viscus, comparatively speaking, loosely connected with the other abdominal viscera, and with the general habit; the latter are organs of elevated sensibility, not only intimately associated with every part of the system, but themselves forming the chief viscera of the abdomen; and with their blood-vessels, nerves and membranes making up the great bulk of this cavity. From this, I believe, we rightly infer, that the liver is an organ in the animal economy of far inferior importance to the digestive tube; and I maintain, that its disorders are by no means to be compared with those of the extensive surface of this canal, either in frequency, or severity, or consequence to the welfare of the constitution. A

principal object of the following observations is to enquire into the evidences of this fact, and to show, that the organization, vital properties, functions, and sympathies, of this canal, when contrasted with those of the liver, tend to prove, that what are commonly called "*liver and bilious complaints*" are, nine times out of ten, in reality affections of the stomach or bowels,—and, that combined with a consideration of the symptoms, and effects of remedies, the above circumstances become irresistibly convincing of the truth of this assertion.

My attention was early excited towards ascertaining the correct pathology of those maladies, so generally named "*liver complaints*," from a persuasion, that, in the nature of things, disordered or diseased liver is not likely to be, in any degree, so often met with, or of such consequence, as disorder of the functions of the alimentary canal,—that centre of sympathies, to which we are incessantly and immediately applying stimulants and irritants, so numerous and dissimilar; and from finding, that when these evils were treated in the too common way, with active mercurials, they never failed to increase instead of disappearing, being not seldom confirmed, so that the parts affected ever after remained debilitated, and subject to frequent disorder: whereas, a different treatment directed, in the first instance, towards restoring the impaired ener-

gies, and healthy secretions of the digestive tube, rarely failed to remove all complaint. It is not a little singular, that the sentiments of Mr Abernethy and Dr Hamilton, in regard to the paramount frequency of disorders of the stomach and bowels, and the effectual relief to be obtained in them from the exhibition of mild aperients and alteratives, should have gained such general confidence among medical men, when their practice is so seldom and imperfectly followed, especially that of the former writer; the liver still being harped upon continually, as bearing the onus of disease, and calomel accordingly administered with an unsparing hand.

The light thrown upon the subject of the first part of this treatise by morbid anatomy has been drawn exclusively from the records of dissections, contained in the writings of men of professional eminence, rather than from any cases and examinations of my own; because those records are before the public, and as the dissections they describe were not instituted to serve my purpose, they will with justice be received as more satisfactory and conclusive than any I might produce from my own practice.

Though I consider that mercurial preparations are extensively exhibited in such doses, and for so great a length of time, as constitute them active poisons rather than remedies; yet, let it be remem-

bered, that I do not here inveigh against their proper use, but only against their *abuse.* This is an evil of some magnitude in Great Britain; and it appears to me imperative upon the profession, to take a closer and more impartial view of the properties and operation of mercury, particularly of calomel, than has yet been witnessed; seeing, as we do, that scrophula, hydrencephalus, consumption, and indigestion, are fast increasing upon us. These are all diseases of debility, and the last, though not the most formidable, is perhaps now the most frequent. In its treatment, it has been too general to disregard altogether the important principle, that "the relief of irritation is the great object of medicine;" and it appears evident, that in endeavouring to remove supposed disease of the liver, our violent and deleterious measures have greatly multiplied real disorder and weakness of the digestive canal.

PREFACE

TO

THE SECOND EDITION.

I would take the opportunity presented by the publication of a second edition of this volume to say, that its contents are solely the result of personal observation and experience, and I therefore must hold myself responsible for the correctness of the opinions herein advanced. Many of these sentiments are at variance with those widely received on the same subjects, and some of them lead directly to the adoption of a treatment the very reverse of what is too commonly, perhaps I ought to say generally, followed; but when our conclusions are drawn from close observation of the course of a disorder, and the operation of different remedial measures upon it, no difference from general sentiments, however great, ought to deter an author from the statement of his opinions. On the contrary, the greater this difference, on points involving practical consequences, the more desirable is it that

the conclusions should be fully stated, and I have here therefore proceeded on this conviction.

If it is lawful to judge from the effects of remedies on my own dyspeptic system, on that of a near relative who is always in my house, and on the constitutions of the many patients I have seen, I must infer that the principles on which indigestion is generally treated admit of great and manifest improvement. It appears to me that we may come to the same conclusion, in regard to the indications which regulate the treatment of chronic disease in general, and I think, notwithstanding the multitude of medical books now in being, that a Treatise describing at length the nature and correct principles of treatment of *chronic disease in general*, is a work much wanted, and, from the greatly increased and increasing number of chronic maladies, capable of being made of more real service to the public, than any other single medical publication that has been, or could be written. In the absence of such a book, the young medical practitioner cannot too sedulously yield himself to the study of the principles of management described in the fourth chapter of this volume, which will be found to be those of the greatest importance in all chronic disorders.

Croyden, Surrey.

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A

TREATISE

ON

INDIGESTION.

CHAPTER I.

ON THE NATURE AND SYMPTOMS OF INDIGESTION, AND WHAT ARE USUALLY CALLED, BILIOUS OR LIVER COMPLAINTS.

THERE appear to me to be two prominent errors in the medical practice of the present day: one, is the mistaking severe disorders of the stomach, and intestinal canal, for disease in the liver; the other, is the employment of large doses of mercury, for the cure of these supposed "*liver complaints.*" The mischief that arises from these errors is incalculable. They are wide spreading evils, whose destructive influence is unhappily felt by persons of every age, rank, and condition, and which call aloud for a remedy.*

* The evils here adverted to, though exceedingly prevalent throughout the United States, are more especially so in those situated towards the south and west, where they exert an almost universal influence over the practice of medicine.—*Edit.*

The term "*liver complaint*" is now in the mouth of every one; and it is well known, that mercury in some form, generally the most injudicious, is the universal medicine for all kinds and degrees of disorder in the digestive organs. A patient suffering from such disorder, which is usually denoted by oppression at the stomach after eating, want of appetite, weakness, depression of spirits, irregularity of the bowels, discoloured motions, &c., can at this time hardly consult his physician or apothecary, without being told he has a "*liver complaint*," and, as a necessary consequence, being soon loaded with calomel or blue pill. Indeed, it is a fact, of which I am convinced from ample experience, that even the slighter forms of derangement in the assimilating viscera are often designated by the above fashionable term, and treated accordingly.*

It is much to be regretted, that there is a fashion in medicine, as well as in the other affairs of life. A few years ago, the majority of ordinary complaints were said to be on the nerves: now, they all depend upon, and centre in the liver. On this subject, a modern writer has well observed, "the princess, afterwards Queen Anne, was subject to hypochondriacal attacks, which her physicians pronounced to be spleen, vapours, or hyp, and recommended Rawleigh's confection, and pearl cordial, for its cure; this circumstance was sufficient to render the disease and remedy *fashionable*, and no

* See the valuable little work of Dr Hall on the Mimoses.

other complaint was ever heard of in the precincts of the court but that of the vapours. Some years afterwards, in consequence of Dr Whytt's publication on 'Nervous Diseases,' a lady of fashion was pronounced to be nervous—the term became general, and the disease fashionable; and spleen, vapours and hyp, were consigned to oblivion. The reign of nervous diseases, however, did not long continue, for a popular work appeared on Biliary Concretions, and all the world became *bilious*."* It is an unhappy circumstance, that the world still continues in this state, and that both the disease and its remedy have taken so deep a root in the professional mind, that there is yet no appearance of a change to another ideal fashionable malady, whose favorite remedy, we might hope, would be a medicine more like pearl cordial or Rawleigh's confection than calomel, and therefore more congenial to the human constitution, and which, if it were not attended with any sensible benefit, would possess, at least, the advantage of being innocent.

Those disorders, which are, in common language, called bilious and liver complaints, are denoted by some or all of the following symptoms, viz. a sense of distention and oppression after eating, with flatulent, acid eructations; diarrhœa, or constipation and uneasiness of the bowels; furred tongue; impaired appetite and strength; discoloured motions, they being either green, dark-coloured, black, or

* Paris's Pharmacologia, vol. i.

much too light; nausea, headach, and bilious vomiting; palpitation of the heart, with or without occasional pain in that organ; pain in the pit of the stomach and towards the right side; sallowness of complexion; and depression of the spirits: —and if the chief, or the whole of these symptoms are present, especially if in a severe degree, it is usually considered sufficient to justify the opinion, that a liver disease exists. But according to my experience, a very large majority of those maladies are not liver complaints, but properly disorders of the stomach, and intestinal canal; and this fact will form the subject of consideration in the first part of this book.

It is acknowledged, that in every severe disorder of these viscera, the liver participates, and its secretions are consequently vitiated; but this is a secondary affection, and very different from the state in which that organ is usually considered to be found. They are not, as is erroneously imagined, primarily and chiefly liver diseases, in which there is, at least, incipient disorganization of that viscus, or a condition nearly approaching to it, which is the idea commonly intended to be conveyed to patients, and generally received by them, from the use of the term *liver complaint;* but are functional derangements of the stomach and intestines, the liver being affected secondarily and sympathetically; and so far from requiring large and repeated doses of mercury, for the restoration of its healthy functions, that they can be permanent-

ly re-established only by the use of means directed to correct the original morbid affection. Among these means, we shall see that mercury is not always admissible, even in minute doses, and that in large ones it is invariably pernicious.

So vast a sink of disease has the liver been thought of late, that it is considered by some men, of no small professional eminence, as amongst the greatest improvements of modern medicine, that the attention of the practitioner is duly awakened to the "remarkable sympathy" which it exerts in its functions with all the other viscera! This sentiment appears to me utterly inconsistent with our physiological knowledge, and with the light thrown on the pathology of abdominal disease by morbid anatomy: it seems invalidated by established facts. When we remember the dull sensibility of the liver, and the loose* connexion it has with the other viscera of the abdomen, and with those of the chest, by reason of the small number of its nerves, we are at a loss to conceive how this "remarkable

* I wish the reader to bear in mind, that throughout this book, when contrasting the abdominal connexions and general sympathies of the liver with those of the stomach and intestines, I speak relatively. It cannot be my desire to endeavour to show that the liver is really slightly connected with the other abdominal viscera and general system, but that this connexion is *much inferior* to that of the stomach and bowels. It is on this inferiority of connexion and sensation, that I found my opinions of its inferior importance to the well-being of the whole frame, which if I succeed in proving, is all I require to show that other language, and more lenient treatment, than is commonly employed, ought to be adopted.

sympathy" can exist between them; and if our judgments are unbiassed by theory—unwarped by *bile*, surely we are naturally led to question it; but if it be transferred, as it ought to be, to the alimentary canal, we are so far from being unable to perceive the source of that intimate and important sympathy subsisting between this and every other organ, and indeed with the remotest parts of the body, that we are surprised it has so long escaped due attention. For whilst the anatomist notes the comparative paucity of nerves distributed to the hepatic viscus, he is struck with the number and variety of them, almost innumerable, which ramify and subdivide upon the alimentary canal and mesentery, especially upon the upper part of the former. These, by their connexions with each other, with the nerves of the spinal marrow throughout, and with those of the chest and head, establish such an intimate intercourse of sensations and affections between themselves, and every other part of the body, as readily explain the marked and powerful influence they exercise over the functions of every organ, even the most distant, and of both the external and internal surfaces. In these nervous connexions, and in the elevated sensibility arising from and dependent upon them, we at once recognise the foundation of the constitutional origin of local diseases, and the source of those wandering pains, and indescribable sensations as well as of that great nervous depression, and general disorder and debility, invariably accompany-

ing an unhealthy state of these assimilating viscera. By reason of these extensive and diversified associations, the stomach and bowels become a centre of sympathies, and disorder, originating here, rapidly propagates itself to every other part. Thus we see the propriety and necessity of attending closely to the state of these internal viscera, in diseases of every class and degree, whether original or sympathetic.

Though I do not consider the nerves as the exclusive instruments of sympathy, they are unquestionably the chief sources of it; and, therefore, it is a natural inquiry, where this "remarkable sympathy" clearly appears from disordered liver, and how does it arise, situated as this viscus is, so much without the nervous connexions established between the remaining assimilating viscera, and all other parts of the body, by the important system of the great sympathetics, and the par vagum? These sympathetic nerves are the principal links which unite the internal nutritive functions, to those which keep up the relation of the animal with external objects; and it is by this bond of union that the derangement of their important functions, whether by acute or chronic disease, is necessarily attended with proportionate changes in all the acts of the animal economy, in the same manner as the defects of one wheel interrupt or disturb the mechanism of a whole machine. But, as was observed above, so imperfect are the sensibilities of the liver, that though acute inflammation

of any portion of the alimentary canal is invariably marked by the acutest suffering, and the most alarming symptoms, which, if not checked, speedily terminate fatally, inflammation of the liver will be making destructive progress when the patient slightly complains only of a flux,—frequent inclination to stool,—gripings and watery motions; the heat of the surface being but little increased, and the pulse neither hard nor quick; and thus hepatitis *generally* appears, even under the burning sun of the east. Morgagni mentions several instances of inflammation of the liver, marked by no peculiar symptoms, an occurrence with which our naval and military surgeons, who have served long in tropical climates, are very familiar.* In the

* Dr Archibald Robertson, in his Medical Topography of New Orleans, in describing the frightful march of dysentery, which "knew neither pause nor hindrance, but, like the fabled vulture of ancient mythology, pursued its cruel task from day to day" amongst the British troops before that place, observes:—"Oftener the complaint would make its attack with the common introductory symptoms, and *no pain in the right hypochondrium was felt throughout the disease, either on inspiration, or strong pressure under the false ribs.* In whatever garb of disguise it made its appearance, disease of the liver (as I have before stated,) and, consequently, a vitiated state of its secretions, were undoubtedly the primary cause of the mischief. Dissection of the fatal cases showed structural derangement,—a soft friable condition, and generally suppuration of that gland. I have often found two separate abscesses in the parenchyma of its large lobe, the one generally less deep-seated than the other, and containing, in some instances, a quart of pus, similar in colour and consistence to what is usually found in psoas abscesses. *How such extensive disorganization and formation of matter could take place, without any preceding palpable indication of local mischief, is to me still a mystery:*

ordinary chronic affections, also, of this viscus, occurring in this country, so great is its insensibility, so indistinctly do the other viscera of the abdomen, and the general system sympathize with it, that extensive organic mischief has often been detected in it by the knife of the anatomist after death, when the patient during life was uncon-

But such was the fact." In noticing the appearances on opening the abdomen of a naval officer, who fell a martyr to dysentery off New Orleans, he says,—" After the liver had been removed, and laid out for minute inspection, I found an abscess of such extent and so lined in its inner surface with a thick, fretted, and irregular exudation of coagulable lymph, that it resembled a familiar and homely object, viz. a large winter glove, lined with worsted! On accurate examination, a second abscess was found, lower down in the large lobe, containing a pint of pus."

" *This officer had never, at any period of the disease, felt any pain in his side*: From his general intelligence, and from the accurate descriptions he gave me daily of his minutest sensations, I am convinced he would have mentioned that pain, had it existed, even to the extent of a 'sensus molestiæ.' *Besides, he was one of the last men in the world that one would have suspected of hepatic affection, being florid in complexion; and having previously enjoyed the best health all his life.*"

" Instructed by this insidious case, I had my eye to the liver ever afterwards; *but pain of side, or pain on pressure under the ribs, was by no means often felt, though dissection after death brought to light hepatic disorganization, equally extensive as in the above case.*"—Dr Johnson on Tropical Climates, page 438.

Though I cannot agree with Dr Robertson, that this hepatic disease should be considered as the chief and primary cause of dysentery, it being regarded by me as one only, and most certainly not the principal, in a series of morbid causes; yet these extracts tend irresistibly to convince us of the truth of what I here advance, and which it is material for the profession and the public to reflect upon,—the natural and conspicuous insensibility of the liver, and the inferior importance of its functions.

scious of any thing wrong in that region. These persons, when alive, had shown no yellowness or sallowness of complexion, had complained of no pain in the right side, or shoulder, nor suffered under any perceptible weakness, or any other symptom which could lead their friends or physician to suppose, that so large a viscus was actually in a state of irremediable disease. Are not these facts irreconcileable with the hypothesis, of an important and remarkable sympathy existing between hepatic derangements, and all the other acts of the animal economy? Do they not, on the contrary, forcibly convince us how comparatively imperfect the relation of the liver is, how inferior its sympathy, with other parts; proving most satisfactorily the error and folly of calling the prevailing disorders of the digestive organs, *bilious* complaints? And when we reflect upon the extensive nervous influence, the exalted sensibilities, and the great importance of the functions of the stomach and bowels, do not the probability and rationality of considering these affections as centering here, and not in the liver, become apparent?

The fact of positive disease frequently taking possession of the liver, without the constitution, or any single viscus sympathizing with it, and, therefore, without its being discovered during the life of the patient, cannot be denied. In order to overcome the powerful argument thence derived, against the supposition of so "remarkable a sympathy" being exerted by this viscus, in its functions

with all the remaining viscera, will it be asserted, that it is not the organic injury, but the simple derangement of function in the liver, that is attended by effects so extensive and pernicious? This follows of course: But it is, at least unreasonable, and contrary to what takes place in any other organ; having for its support, merely the discoloured appearance of the alvine discharges, and the power of mercury in restoring them to their natural colour, which we shall presently see is a weak prop. Those who maintain this opinion have the cause of an improbable anomaly to explain, for we meet with nothing similar in the lungs, the head, the digestive tube, or elsewhere. Here the favorable prognosis of the physician is in proportion to the freedom of the affected viscus from structural disease, and the degree in which the remaining viscera sympathize with it, and in which the general habit emaciates and sinks, is also generally in the same proportion. This accords with all we know respecting the laws of organic life; and before it can be admitted, that these laws are reversed in favour of hepatic derangements, we must assuredly possess some clearer and better reasons for it than have hitherto been attempted.

The stomach, and first intestines, unquestionably perform the most important offices in the frame, and are the grand sympathizers with all the local and constitutional derangements of the system, the cause of which has been pointed out as arising chiefly from the enlarged and varied communica-

tions of those nervous apparatus, known by the name of the great sympathetics, and par vagum. These assimilating viscera carry with them in their action all the other organs of the economy; "they summon to their aid the whole system of the vital powers; and this sort of derivation is the more conspicuous as the organization is more delicate, the sensibility more lively, the susceptibility greater." In short, it may be truly remarked, that they are the great arbiters of health and disease, of life and death. Yet, in the modern fashionable system of the pathology and treatment of abdominal disease, these are considered parts of far inferior consequence to the liver; this is regarded as the fruitful "*fons malorum*," and thus we retrograde in our knowledge of diseases, and in our acquaintance with the means of cure.

In the adult,* the alimentary tube is at least six times the length of the body: so delicate is its organization, so important its functions, that, as we have seen, it possesses a distinct system of nerves, remarkable for their acute sensibility,† and for the fineness, as well as the number, and the connexions of their filaments. It is the grand medium of sympathy; and there is an immediate connexion

* In children it is a great deal more extensive than even this, the extent of surface which it unfolds, being always proportionate to the assimilating exigencies of the constitution. Since the growth of the body is most rapid in the earlier periods of life, this important tube is therefore then proportionally longer.

† It is true that this sensibility is *sui generis*.

between it and the centre of all nervous influence, the brain, for there is an union in the stomach of the cerebral and sympathetic nerves: in it, the food we take is converted into a homogeneous nutritive fluid, which now nearly resembles, and is soon actually to become blood, the substance that gives life and energy to every part. This canal is the distinguishing characteristic that separates the animal from the vegetable creation, and is therefore essential to every animal, from the zoophyte, eternally fixed in his rocky habitation, up to man, whose restless activity carries him to the very ends of the earth. It is the part to which the properties of life seem to adhere with the greatest tenacity, for whatever is the kind of death the animal dies, this is the last organ in which the traces of life may be discovered. Moreover, it is the most irritable part of the human body; and such are its connexions and sympathies, that the morbid phenomena, resulting from irritation of its internal membrane, are infinitely more numerous and distressing than all the rest of the catalogue of human diseases collectively. It may be safely asserted, that seven-eighths of human afflictions originate in this cause. No bounds can be placed to the various maladies it stimulates, and to which it gives rise. At one time it will produce all the phenomena of typhus fever, of the most malignant grade, and the patient will be as completely delirious as in phrenitis itself: at another, the interruption to digestion,

conjoined with the sympathetic disorder of various other functions of the system, resulting from simple irritation of this extended surface, will terminate in actual dissolution, no traces of disease being discoverable in it, or in any other part after death. Then, surely, the man who can compare the importance of the hepatic functions with those of this tube,—who can regard the disorders of the former as those which should engage our chief attention in abdominal derangements, and in the diversified, local, and general maladies, to which the human body is subject, takes a lengthened stride backwards in physiological and pathological science, which every benevolent mind must regret, on account of its consequences, and in which no one will follow him who attains to correct views, and to a successful practice in medicine.

There are several circumstances which have concurred to render hepatic disorders and diseases, and their remedy, calomel, fashionable in Great Britain. The five following have probably had the greatest weight, and we shall, therefore, confine our attention principally to them.

They are,—1st. A fulness, and tenderness on pressure, and pain, being often present at the pit of the stomach, extending a little to the right side.

2d. The alvine discharges being almost always discoloured in bowel complaints, and not unfrequently green or black, like pitch, from which they have been called *bilious;* and the power of

small doses of mercury, in correcting this appearance.*

3d. Organic disease being sometimes found in the liver after death, in cases of intestinal, and other disorders, when no traces of such mischief are detected in any other viscus.

4th. A great number of our countrymen annually return from the East and West Indies with biliary and intestinal disorders, arising from their residence within the tropics, where the liver is the organ the most obnoxious to disease, and where calomel is the sovereign remedy for all bodily ills: these, on their return to England, are ready to pronounce the maladies of their friends to be liver complaints, and cannot, of course, conceive any other medicine equal to calomel.

5th. The sensible influence which the opinions and practice of professional men from India have

* In almost every instance where from a diseased action in some part of the intestinal canal, more particularly in the colon and lower portion, the ordinary secretions of its surface become changed and the appearance of the stools correspondingly altered, a liver affection is supposed to be at the bottom of the case. Should the stools be darker than ordinary, or green, the bile is pronounced vitiated, and nothing will serve to correct it but a course of mercury. If on the contrary the colour appears lighter than usual, the bilious secretion is deficient, the liver torpid or its ducts obstructed. Under all these circumstances the real seat of the disease is generally overlooked, and an erroneous practice adopted. The true causes of the diversified appearances produced by the most frequent disorders of the first passages will be found very happily explained in a subsequent page of this treatise.—*Edit.*

had and still continue to have, over medical practice at home.*

1st. The fulness and tenderness here referred to must not be confounded with the enlarged and indurated state of the liver, occasionally to be felt by manual examination. This is generally too sure an indication of organic injury in that viscus, while the former, for the most part, affords us no grounds for such a suspicion.†

This fulness and soreness at the pit of the

* The prejudices which prevail in our southern and western states exert no less influence over the practice of this country, than those of the physicians from India over that of England.—*Edit.*

† Mr Abernethy (at page 88 of his Observations on the Constitutional Treatment of local Diseases) has related the case of a young lady, in whose hepatic region an incipient enlargement and hardness of this kind was felt externally. While reading it, I could not help contrasting the gentle means this gentleman used with perfect success for the cure of this affection, consisting of "mild mercurials and aperients," with the active stimulant measures too commonly resorted to in similar instances, where calomel in large and oft-repeated doses is forced upon the unhappy patient. He says, "I found, upon inquiry, that the chief seat of her pains was in the posterior edge of the liver. Indeed, that viscus was enlarged, so as to be felt in the epigastric region, and was so tender as to cause much pain on being compressed, at any part along the cartilages of the ribs. Her tongue was furred; her appetite deficient; digestion bad; bowels costive; and stools black, or else untinged with bile. I had no hesitation in advising that attention should be chiefly directed to rectify the disorder of the chylopoietic viscera. *Mild mercurials and aperients* were given, by which, with other means, she got materially better in health, and was able to walk about as well as ever. The gentleman, who attended this patient, met me accidentally two months afterwards, and informed me that she was quite well."

stomach, and in the right side, I believe usually to depend upon irritation and debility of the internal surface of the stomach, duodenum, or colon; and I think that the situation, and acute sensibility of these parts,—the frequently rapid development of the symptoms,—the character of the swelling,—the effects of remedies,—the insensibility of the liver, and the appearances, on dissection, of fatal cases, sufficiently prove the correctness of this idea.

At first view, it is evident that we must often be liable to mistake the nature and seat of the swelling and pain we are considering, if great attention be not paid to the case, since the stomach and duodenum, as well as the colon, are situated in the immediate region of the affection, close upon the biliary organs. The ensiform cartilage, or what in common language is called the end of the breast-bone, will be found to present commonly to the middle of the stomach, and the lower orifice of this organ, when in its natural state, is opposite to the fossa umbilicalis of the liver:—The duodenum, or first intestine, on quitting the stomach, goes in a direction downward; then it passes upward till it touches the gall-bladder; then making a sudden turn, it descends directly near to the right kidney, and is involved in the lamina of the mesocolon; it then takes a sweep towards the right side, obliquely across the spine:—the colon ascends on the right side of the small intestines, before the kidney; passes across the upper part of the belly, under the margin of the liver (in contact with the gall-blad-

der), and before or under the stomach. Such being the situation of these viscera, and of the liver, we cannot be surprised if their derangements are often confounded, and that swelling and tenderness, existing either in the stomach, or duodenum, or colon, should, for want of strict examination, and from the superior attention paid of late to the liver, be ascribed to disorder or disease of this part.

Tenderness and swelling on the upper and fore part of the abdomen, is frequent in disorders of the digestive tube, but they are in general different from those arising from enlarged liver, both in seat and character; the fulness not being situated so much towards the right, or so low as the latter, and being not a hard, but a puffy, elastic swelling. The tenderness also differs in its seat, from that produced by hepatic affection, in the same way as the enlargement, and it is not, like the latter, felt only on pressure of the hand, but is almost always present, more or less, until removed by the application of remedies, and is sometimes very troublesome when no pressure whatever exists on the part. The fulness consequent upon chronic hepatitis is very generally quite on the right side, and felt lower than the epigastric region; but when it arises from irritation of the mucous membrane of the stomach, it is found mostly at the very end of the breast-bone:—when it is the consequence of a similar state of the duodenum, a little to the right, and somewhat lower than the termination of this bone. When it is still lower, and seemingly

across the upper part of the belly, the colon is generally its seat.*

These symptoms often supervene in two or three weeks, or even a shorter time, after the patient is first conscious of indigestion, which is extremely unfavourable to the supposition of existing liver disease, as organic derangement takes a much longer time to develope itself in chronic disorders. From the acute sensibility of the alimentary canal, we are not at a loss to account for the rapid development of these phenomena, while the faint sensibility of the liver becomes an additional reason for our considering pain and swelling, in its texture, to be rare when compared with a similar condition of the digestive tube. The different effects which follow local blood-letting in the two complaints, likewise point out a real difference in their nature. In this puffiness which I consider symptomatic of disorder in the alimentary canal, the application of leeches is indicated, and is almost immediately followed by striking, permanent benefit: in chronic disease of the liver, the local abstraction of blood is rarely indicated, and, when resorted to, is attended with very little and transitory relief. Besides these well-marked distinctions

* The special attention of the reader is requested to the descriptions, contained in the preceding and following paragraphs, of the relative situation of the parts in the abdomen, most commonly the seats of disease. A thorough acquaintance with this subject is of the first importance towards arriving at a correct diagnosis.—*Edit.*

between the two maladies, it will be found, if I mistake not, that the pain changes its place a little, and the patient gains some relief, on the expulsion of wind, in this affection of the stomach or bowels, which change and relief do not occur in diseased liver.*

The duodenum, or first intestine, is fixed by a rather loose cellular tissue to the posterior side of the abdomen, and dissection has proved, that it is susceptible of such dilatation, as occasionally to equal even the stomach in size. The existence of pain in this part may frequently be detected by its being felt under the seventh or eighth rib, passing deep, seeming to be in the seat of the gall-bladder, and stretching towards the right hypochondrium, and to the kidney, and again appearing as if on the loins. From the course of the duodenum, we should expect pain in it to take this direction, and we readily perceive how liable it is, in our day, to be confounded with that arising from hepatic affection. Dr James Hamilton, Jun. remarks, that when along with the usual symptoms, there is a milky white appearance of the urine, as if it were mixed with chalk, he never has any doubt on the subject of its being a disorder of the first intestine, because he has invariably found the duodenum affected under such circumstances, and he never observed the same appearance of the urine in

* Ferriar's Medical Histories, vol. ii, page 28.

diseased liver.* I am sorry that I have not been able to ascertain what importance is to be attached to this symptom. If future observation should prove it to be generally present in the disorders of the first intestine, while it is as often absent in cases of disorganized liver, of course it will materially assist us in forming a correct diagnosis in these diseases. It is nearly certain, that in disease of the biliary organs, the urine seldom fails constantly to deposit a pink sediment, which kind of deposition very rarely appears, for any length of time, in disorder of the digestive canal.

The duodenum is more glandular, and more vascular than any other part of the small intestines; it is the part which receives the biliary and pancreatic fluids, where the peristaltic motion is begun in the natural action of the bowels, and in which a kind of second stage of digestion takes place; and it is to be regretted that its disorders do not gain greater attention among us, as it is more than probable that they constitute some of the most painful and severe within the abdomen, and form no mean proportion of those maladies commonly treated as *liver complaints*. Hoffman, Sylvius, and a few others, have treated of them in their works, in an instructive way; and Mr John Bell correctly observes, that it has been the opinion of the most respectable old physicians, those whose knowledge of diseases has been drawn from an

* Observations on the use and abuse of Mercury, page 110.

acquaintance with anatomy, from the frequent inspection of dead bodies, and the observation of the symptoms during life, that the study of the diseases, connected with the duodenum, is the most important which can occupy the attention of the medical inquirer.*

The intestine colon seems especially liable to excessive irritation and disease, and that tenderness and swelling in the right side is often owing to such a condition of this part, I am persuaded from observation, and the fact is corroborated by the testimony of respectable writers. In the records of dissections of protracted and fatal cases of abdominal affection, to be found in different medical works, the colon is noted as having presented, in the majority of instances, particular marks of organic lesion. This is observable in the writings of Mr Abernethy, M. Louis, M. Broussais and Dr Blackall. Out of fifty-three cases of disease in the alimentary canal examined by M. Andral, Jun., twenty-eight presented remarkable disorganization only in the cæcum and colon, and the greater part of the remaining number shewed an analogous state of the lower portion of the ileum, immediately joining the colon. In five out of six fatal cases of abdominal disease alluded to by Mr Howship, the disorganization was almost confined to this part of the canal.

The following case, for which I am obliged to

* Bell's Anatomy, vol. iv, page 70. 1804.

Mr Howship, strikingly exemplifies the mistakes sometimes made in practice, in considering an affection of this bowel as disease of the liver; and it is hoped that it will prove an useful illustration of the correctness of the opinions above delivered on this point.

"The subject of this case was a lady, whose complaints had, by various practitioners, been attributed to disease in the liver; upon which presumption she had, in the early part of her illness, been repeatedly subjected to the influence of mercury, without benefit. Of several who had seen and attended her, Dr Hooper was the only physician who could never be persuaded to believe her complaints hepatic, notwithstanding constant local uneasiness, frequently severe pain, and a degree of tumour below the cartilages of the ribs on the right side, with occasional pain at the shoulders. The action of the bowels was irregular; sometimes there were twenty-four stools in as many hours; at others, strong purgatives were required to be frequently given for days together, without effect."

A variety of medicines were given, but in vain, and she died in February 1820.

"On examination, in presence of Dr Hooper, I found a thickened, discoloured, soft and elastic tumour, lying across the upper part of the abdomen, a circumscribed portion of which tumour had visibly raised the external parietes, previous to their being laid aside. From the right extremity

of this tumour several strong adhesions passed off to the adjacent surface of the parietes; from its anterior part also, several short thick cords, the result of effusion, were firmly attached to the peritoneum, just within the scrobiculus cordis. *The tumour itself turned out to be the stomach and transverse arch of the colon, closely and completely adherent to each other;* the former viscus much discoloured, the latter much diseased, so altered in texture, and so much thickened, as to have entirely lost its natural characters."

"The adhesions just mentioned were exceedingly strong, and all proceeded from the colon, which had evidently been the seat of the primary inflammation. The bands attached to the scrobiculus cordis clearly explained the distressing sense of gnawing, or burning, or glowing heat, with the occasional sense of pulling, or drawing at that part, from which she was never altogether free."

At the latter period of her illness, the patient had dropsy, and Mr Howship adds, "The ascites proved to have been merely the consequence of the derangement in the function of absorption, resulting from the first inflammation; *for the liver was healthy in structure*, although its peritoneal covering was somewhat thickened."*

Hard drinkers are thought to be particularly obnoxious to disease of the liver, which is unques-

* Howship on Diseases of the Lower Intestines, page 80.—3d edition.

tionably true; but now that the diseases of the intestine colon are considered, I ought not to pass over unnoticed the fact, that in many such instances the hepatic viscus has been found after death quite healthy in its structure, while the only or chief disease has been in the colon. Mr Howship, at pages 123 and 125 of the work just referred to, has noticed two cases of this description, and Dr Blackall, in his work on dropsy, mentions others. Mr Howship's first case (page 103) was that of a gentleman, who, after many years of hard drinking, died from a blood-vessel in the lungs bursting into the cavity of the chest; "the liver, stomach, and bowels, were apparently healthy, except the head of the colon which felt thickened. I therefore dissected this part out, secured its vessels, and the same evening injected it. In this operation, scarcely any resistance was felt from the arteries; and, on cutting open the bowels, I found this was owing to a broad band of ulceration, by which the villous membrane surrounding the head of the colon and cavity of the cæcum was destroyed, the vessels upon the ulcerated surface allowing the injection to flow freely into the gut."

With regard to positive pain at the pit of the stomach, and in the sides, I think it is so common, that few cases of derangement of the digestive organs occur without some degree of it, and therefore it is not an indication of disease, or disorder in the liver. Dr Marshall Hall is of the same opinion. "Sometimes," he observes, page 75,

"there is extreme pain extending across the false ribs, leading to the suspicion of inflammation of the pleura, or, together with the affection of the complexion, it leads to the suspicion of inflammation or disease of the liver."—"It is distinguished by being liable to recede and to recur, by varying its situation, frequently by being unattended by tenderness on pressure, when the examination is made with proper care." This author is fully sensible how often pain in the sides leads to a supposition of a "*liver complaint:*" in referring to the means of distinguishing those affections of the digestive organs, which are attended by a sallowness of complexion, and occasional pain in the side, and which are therefore often confounded in practice with disease of the liver, he remarks: "By these means, the list of chronic diseases of the liver would be considerably curtailed, for I could recall, at this moment, numerous instances of this error in diagnosis."*

I have known several patients, in whom, together with the usual dyspeptic feelings, there was swelling and frequent darting pains in the epigastric region, and sides, who have been under the common course of treatment for a "*liver complaint*" for several weeks, or months, without deriving benefit, but rather growing worse; and who have had this pain almost directly removed, the enlarge-

* Essay on the Mimoses (2d edition), page 144. See also the Cases at page 76 of the same work.

ment also gradually disappearing, under the use of means directed to restore the digestive tube to a healthy state. In some cases of this description, there has existed so great a degree of tumefaction, and occasional pain, in the side, as would have led me, at first view, if I were not aware how fallacious these symptoms are, to pronounce them as certain indications of disease in the liver. When, however, the other appearances denoting disorganization were absent, it has been my practice to reject such an opinion, and the effects of remedies have invariably proved its propriety.

The late Dr James Curry (*de mortuis nil nisi verum*), whose book on biliary concretions, together with his mode of practice, operated greatly in making diseased liver, and its supposed remedy, calomel, so very fashionable and fatal, was so wedded to his notions on this subject, that in his patients, *invariably*, the liver was considered the real source of all their ailments; and if, when labouring under stomachic irritation and disorder, they complained of pain in the left side, in the region of the stomach, he would endeavour to persuade them they were mistaken, and that it certainly was in the right! If he could not bring them over to this belief, it was his custom to say—Ah, I shall bring it there then! What value can be attached to the opinions, or what good could attend the practice of a man whose judgment was so amazingly perverted? That this unfortunate physician did often bring the pain to the right side

there is no question, for he took a sure and speedy method of doing it, by administering his *panacea* (calomel), in large, oft-repeated doses, which, by being excessively stimulating, and debilitating the secreting vessels of the liver, and of all the other digestive organs, provoked disorder, and paved the way for a rapid supervention of disease. It is well known, that Dr Curry was in the habit of salivating people twice and even thrice during a single attendance, and it is to be feared, that the patients he has left behind, with broken, ruined health, "the remnant of their former selves," from the excessive use of calomel, are very numerous. The professional man, who allows his judgment to be so far perverted by a favorite hypothesis, or notion, as to lead him, without scruple or care, to institute measures that are inimical and poisonous to the constitutions of his patients, may be truly called unfortunate, and his errors ought to be pointed out, that the public may be sensible of the danger of such means, and young practitioners also put upon their guard.*

* I should not allude in this way to Dr Curry's opinions and practice, if it were not, in my opinion, necessary to bear the most pointed testimony against them.

[Prototypes of Dr Curry are by no means uncommon in America, and the number cannot be expected to diminish whilst the pathology of abdominal diseases remains in its present obscurity, and the prevailing prejudices in favour of hepatic predominance, and the indispensableness of mercury continue. Nothing but the establishment of the most positive data can arrest the progress of vague speculation, and free the judgment from perversion.—*Edit.*]

2d. When the stomach and other digestive organs are weakened, it is certain that they are often unable to exert that power over the matters they contain, which in a state of perfect health prevents their acting chemically on each other, and occasioning decompositions and forming new combinations. This power, which the healthy stomach exercises over its contents, was appropriately called by Dr Fordyce, its *governing power*. Under disorder, when this governing power is lost or impaired, an acid is generated in the stomach and bowels, which decomposes the bile and produces a green precipitate, and green stools are the consequence; in other instances, the acid combines with the soda of the bile, and there is a thick, viscid, bitter precipitate, and the stools look like pitch. In some diseases, a green bile is brought up by vomiting. It is common to call such discharges as these *bilious*, and to refer their unnatural appearance to a morbid action in the liver; but the fact is, that the bile itself, in such cases, undergoes a chemical change in the stomach and intestines, in consequence of the energies of these organs being impaired by disorder, and the idea of these discoloured evacuations being owing to an unhealthy secretion of bile, receives therefore little countenance from their existence. In some instances they appear to depend purely upon this decomposition of healthy bile; in others, upon that change united with diseased secretions from the alimentary canal itself: this last state is the most

common, and is almost always present when the stools are very copious and fetid. That bile does undergo this decomposition, is proved by some circumstances which are observed to take place out of the body. It is known, for instance, that the fæces of infants, although yellow when voided, frequently become green after some time; and the urine of a jaundiced patient, which is of a deep yellow when voided, becomes after a few hours green. It is not easy to account for this change of colour, but by supposing that an acid is generated by the reaction of the elements of which the bile consists. Besides, we are aware that the intestinal juice in a healthy state has a brackish taste, and turns turnsol paper of a deep red, shewing that it possesses acid properties; it is more than probable then, that under disorder, this acidity is much increased; and that it should, in that condition, from its operation on the biliary and pancreatic fluids, give rise to green or black, viscid discharges, is no more than we might anticipate.

That the black, pitchy, or yeasty, and fetid nature of the motions, are owing much more to an unhealthy condition of the mucous membrane of the bowels, than to a wrong action of the liver, is rendered more than probable by the large quantity of these matters often voided under disorder,—by the mucous and bloody fluids with which they are frequently mixed, evidently vitiated secretions from the intestines,—and by the organic lesions and marks of inflammation, not seldom found after

death, in the large or small intestines in these cases, when the liver shews no appearances of disease, or excessive disorder.

It is not likely, that the immense quantity of discoloured, offensive matter, sometimes discharged under severe disorder of the assimilative viscera, is poured forth entirely or chiefly from the liver, because its secerning vessels bear no proportion in point of number, activity, or importance to those opening upon the vast line of bowel contained in the abdomen. Patients sometimes void, in the course of twenty-four hours, many quarts, and some even gallons, of various coloured liquids. Morgagni has cited the example of a woman, who, in one day only, passed, *per anum*, forty pints of a limpid fluid. Does it consist with our knowledge of physiology, to suppose that this is derived principally from any other part than the mucous coat of the bowels, which only, from being of great extent, seems fully adequate to such prodigious evacuations? Highly stimulating agents, such as large doses of calomel, excessive eating and drinking, and other similar practices, act directly on the mucous coat of the alimentary canal; they irritate and disorder it, the first effect of which is to occasion an augmented flow of blood into it, and its natural secretions become, in consequence, often increased, and almost invariably faulty. Sometimes diarrhœa follows, and proves a salutary crisis to the existing irritation. The quantity of liquid

occasionally exhaled by this coat under such circumstances is astonishingly great.*

The slimy mucus, frequently found mixed with the fæces of persons labouring under aggravated disorder of the digestive organs, is certainly indicative of a highly disordered state of the functions of the bowels. The quantity of this is sometimes excessive, and now and then appears like a purulent secretion. In adults, it is generally considered an indication of long standing disorder in the bowels.† It would appear, that there are not many cases of severe *bilious* disorder, where this slime is not remarkable, and we are assured it cannot come from the liver. It is particularly frequent in children, whose greater susceptibility and irritability render them very subject to bowel complaints: at which we cannot be surprised, when we recollect the close connexion subsisting between the alimentary tube, and every other part of the body, by its nerves and blood-vessels. In this association, we perceive the reason why painful dentition, indigestible food, or cold followed by fever, invariably produces disordered bowels, and unnatural stools. Indeed, let irritation of the nervous system be excited from whatever cause, it is commonly followed

* It is probable, that the quantity of healthy *intestinal juice*, formed in twenty-four hours, amounts to eight pints. This was Baron Haller's calculation from experiment. We know how very small a proportion the quantity of bile, secreted in the same time, bears to this.

† Scudamore on Gout, &c. 4th edition.

by derangement of the digestive tube; its secretions become vitiated, and either deficient, or in excess. Whether the irritating cause be at the beginning local, as from an injury, or general, as from fever, it is soon propagated to this highly sensitive part.

Vague observation has considered the black, bloody stools, as morbid discharges from the liver; but an attentive consideration of the phenomena, and of the attending circumstances, inclines one to look upon them as diseased secretions from the internal surface of the digestive canal; and this opinion gains confirmation from the appearances presented on dissection. Bloody motions, says Dr Marshall Hall, are "affections of much more frequent occurrence, than is generally imagined, in abdominal derangements." He speaks of vomiting of blood, as being not unfrequently combined with it; and adds, "the two diseases appear to be similar affections of different parts of the *alimentary canal.*" "In several cases, the patient has awoke in the morning with blood in the mouth."* This last symptom, which must have occurred to every medical man of much practice, in cases of deranged general health, does in no small degree strengthen the conviction, that such black evacuations are derived from the bowels, and not from the liver. When the digestive tube is much deranged, the irritation extends throughout, from the mouth

* Essay on the Mimoses, 2d edition, page 74.

even to the anus:—the mouth is parched and hot, and the tongue coated with an unnatural secretion; at the other extremity of the canal, there is heat, uneasiness, and piles; both, though situated at so great a distance from each other, are consequences of the same cause. In like manner, irritation of the internal membrane of the intestines and stomach, accompanied with evacuations of blood, is carried by continuity of surface to the same membrane, lining the mouth; and the bloody state of this visible part of the organ becomes a pretty sure criterion, in what way the internal parts also are affected. We cannot be surprised, if a similarity of action pervades the whole surface, and a hæmorrhagic tendency appears throughout. "If pains of the abdomen are observed, if the skin is burning hot, the pulse frequent; *if the dejections are slimy, membraniform, or bloody*, we may be satisfied that the intestine is the seat of more or less intense inflammation." Sometimes, however, "sanguineous evacuations have been observed to take place *per anum* in individuals, whose intestinal mucous coat was found sound after death. These passive hæmorrhages are analogous to those which take place in many dropsical individuals, at the internal surface of the serous membranes of the chest and abdomen; they are similar to the hæmorrhages, of which the skin, the cellular tissue, and the synovial membranes, become the seat in scorbutics."*

* M. Andral, Jun. on the Pathological Anatomy of the Digestive Tube.

"It seems probable, that the stools, which resemble pitch, are principally composed of *diseased secretions from the internal surface of the intestines*, since they do not seem like the residue of the food, or discharges from the liver.*"

Mr Abernethy, in referring to cases in which there were discharges downwards of black blood, together with other morbid matter, says, "I examined the bodies of several persons who died under attacks of this nature, and found the villous coat of the alimentary canal highly inflamed, swoln, and pulpy. *Bloody specks were observed in various parts;* and sphacelation had actually taken place in one instance. The liver was healthy in *some* cases, and diseased in others."† Again he writes (page 47), "where the disordered state of the bowels had been of longer duration, I have found the villous coat of the intestines swoln, pulpy, tinged with blood and apparently inflamed, and sometimes ulcerated; and these appearances have been most manifest in the large intestines."

In the Medical Repository for 1823, there is a case of diseased peritoneum and intestines, where the stools, in the beginning of the complaint, resembled ink, and towards its termination were of a light colour, purulent, and very offensive. As it shows the connexion which black,

* Abernethy's Observations on the Constitutional Treatment of Local Diseases.

† Observations on the Constitutional Treatment of Local Diseases.

fetid stools have with intestinal irritation and disease, I have inserted an abstract of it here:—

"Michael Slater, ætat. 31, was admitted into St Gile's Parochial Infirmary, October 22, 1822, having a tumour of considerable magnitude situated on the right side of the abdomen, attended with frequent pain and vomiting, extreme emaciation and hectic symptoms. He stated that he had been ill five months; that his symptoms were occasional pain about the navel, which he considered of a colicky nature; vomiting, and *dark-coloured evacuations, the latter of which he described as resembling ink;* and that about a month after these symptoms had come on, he discovered a small tumour on the right side of the abdomen, which, with his other symptoms, had continued gradually to increase."—"He died December 13th.—About three weeks previous to his death, a distressing diarrhœa came on; his evacuations, which had hitherto been scanty, and not procured without the aid of medicine, now became copious, of a light colour, purulent, and very offensive."—"Dissection.—The peritoneum lining the abdominal muscles was found remarkably thickened (the thickening varying from one and a half to two inches) by a substance somewhat resembling fat, but much more firm. On exposing the intestines, an appearance presented itself, which at first seemed difficult to unravel: on more minute examination, however, it was evident that the tumour was

formed by the same thickening or organized deposition already described, and which extended more or less over the whole surface of the peritoneum. *The parts, more immediately forming the tumour, were the lower portion of the ileum and ascending colon*, which, having become agglutinated by coagulated lymph, formed an immense and compact mass. On the anterior part of this tumour, was an opening formed by ulceration, through which a large quantity of matter had escaped into the cavity of the abdomen, which, in all probability, was the immediate cause of death. On following the course of the outer opening, a cavity was laid open, occupying its central part, and extending about eight inches from side to side, through which all excremental matter must have passed for some time previous to death, the structure of the intestines being at this part totally destroyed by ulceration; consequently, there were four openings communicating with the cavity, formed by the ascending colon on one side, and the inferior part of the ileum on the other. *The intestines, through the greater part of their course, were considerably constricted.* The ureter and pelvis of the right kidney were greatly distended with urine. The lungs were free from tubercles, and appeared perfectly healthy. The remaining viscera were natural."

The black vomit, so often present in fatal cases of the yellow fever of tropical climates, was form-

erly thought to be a morbid secretion from the liver, and the black stools common in that disease were also considered *bilious;* indeed, many of the incorrigible sticklers for *liver complaints* may still regard them as such: but close observation, and repeated dissection, have clearly demonstrated the former to be a diseased secretion from the stomach, and the latter vitiated discharges from the bowels. They are unquestionably of similar character to the melæna, and hematemesis, of temperate climes, differing from them only in intensity. In the severer examples of this frightful fever, "the vomited matter is *rarely bilious;* it is a pituitous or ropy liquor, with numerous darker coloured flakes: sometimes clots of blood entangled in mucus, apparently portions of the inner coat of the stomach, are brought up in gulping;—if the body be open, the *stools are black, smooth like tar or molasses,* and offensive;—blood, sometimes, without mixture, discharges itself gradually by the anus, sometimes, *mixed with connected portions of mucus—the inner coat of the alimentary canal—it passes off at intervals in large evacuations.*" In the aggravated form of this malady, "hæmorrhage from the nose, oozings of blood from the ears, gums, and in short, from the whole track of the alimentary canal, *from the mouth downwards,* are observed on many occasions." On examining the bodies of those who die of yellow fever, "the blood vessels of the stomach and intestines are found much distended, but actual inflammation is rarely apparent; the ap-

pearance of the inner surface is seldom uniform through the whole,—the veins are generally distended; but besides this, the inner surface of the stomach often exhibits large spots, or circles of a bright red, resembling actual inflammation; in the centre of which, are frequently seen small points, like beginning gangrene; the villous coat is also loose, in the act of separation, and actually separated in some places. In the second form of this fever, more frequently than in the other, the colour of the inner coat of the intestinal canal is like brick-dust, the coat hanging loose, and almost separated. Sometimes this takes place uniformly through the whole track; sometimes it is confined to particular places, or a congeries of distended blood-vessels, entangled in the mucous membrane, appear in clusters, to bespangle the surface with bloody spots; the cavity is sometimes also lined or filled with black grumous blood."* It is true,

* Jackson's Outline of the History and Cure of Fever, page 187, et seq. (1798). I cannot but remark here, that in this excellent work we find the more correct pathology of fever, both endemic and contagious, and its rational treatment, precisely the same as they have been lately recognized and established among us, and which are now the very reverse of what were entertained and followed by the great body of medical men in the year ninety-eight. The different modifications of fever, of late so ably illustrated by Dr Armstrong, and other recent authors, were clearly pointed out by Dr Jackson in the last century; and these writers add little to the means of cure that were then described and used by him. He has distinctly and correctly noticed the simple, inflammatory and congestive forms of febrile diseases; and, regardless of opposition and reproach, blood letting, purgatives, and aperients, cold

that in the more aggravated forms of yellow fever, the liver appears sometimes uncommonly large, black and distended, as if suffocated with blood; but this is no more than what takes place in the head, lungs and other viscera.

In the second volume of Les Memoires de la Société Medicale d'Emulation, there is a valuable case, in which blood first passed from the stomach by vomiting, and then downwards from the bowels, attended by distention, constant distress, failing, irregular pulse, and cold sweats; the bowels obstinately refusing all impression from purging and injections; the mechanical irritation of the rectum, by the introduction of a large gum catheter its whole length, was followed by the evacuation of three large pots full of black, bilious matter; the abdomen was thus unloaded, and the patient, to all appearance expiring, gradually revived, and eventually recovered. The same thing happened a second time, and was relieved by the same means.

and warm affusion, with free ventilation, and exposure to the air, were his chief remedies. Thus we see, that above five-and-twenty years ago, when the phantoms, debility and putrescency, occupied the minds of all other physicians, and worse than paralized their energies, the enlightened Jackson alone possessed clear, comprehensive, and correct views respecting the pathology of fever, and was pursuing a line of practice at once rational and successful. These are unequivocal marks of transcendent genius and talent, of which few can boast. Indeed, all the writings of this amiable man evince a philanthropy, and an extent and accuracy of acquaintance with medical philosophy, that entitle them to universal attention and admiration, and which rank their author among the best of men, and the most useful and distinguished of medical writers.

The distinguished M. Portal has lately turned his attention towards the investigation of the nature of these black evacuations, and has published a memoir on the subject. He believes that the black matter is not bile, having no trace of bitterness, nor dissolving, like bile in cold water, nor giving any green colour to the water; but that it is pure blood, which, in the bodies of those examined after death, may be seen to transude from the blood-vessels of the stomach and intestines.

Mr Howship has attended several individuals, labouring under severe pains and relaxation in the bowels, with bloody stools; and after considerable attention to these complaints, he is persuaded of their being essentially a morbid affection of the villous coat of the bowels. In one case, which terminated fatally at the second attack, he had an opportunity of ascertaining this fact, by dissection; and the examination shows, that such discharges take place from functional disorder as well as from actual disease, which is agreeable to the extensive experience of M. Andral, Jun.:—"The bleeding had taken place from the capillary or exhalent vessels, upon the internal surface of the great intestine, and although it was evident that every part of the bowel had been a bleeding surface, no part had suffered ulceration, nor was any part inflamed, though the whole was red."*

* Observations on the Diseases of the Lower Intestines, page 99 (3d edition).

The darker fluids, passed in cases of abdominal disorder, sometimes resemble thick, black, bilious stools; at others, they look like grumous, unhealthy blood. As these different appearances alternate in the same individual, under a single attack of disorder; and I have here produced sufficient evidence to prove, that the *bloody* motions are, for the most part, entirely discharged from the intestines; this fact becomes an additional and powerful support to the opinion, that the *black*, *tar-like* evacuations, are likewise derived from the same source.

Dr Ayre, in some observations on disorders of the liver, considers the blood discharged by vomiting and purging, to be poured forth from the liver; but his arguments in favour of this origin of the complaints are very inconclusive and unsatisfactory, and are totally uncorroborated by any facts. He relates the appearances, on dissection, of two fatal cases of melæna; but so far from being conclusive, they throw little or no light upon the subject. If any thing is to be gathered from them, it is that the bleeding took place from the intestines. The first is a case of a girl of thirteen years of age:—the liver, on being cut into, had a blanched appearance, and scarcely any blood issued from it, or from the vessels leading to it; and from this circumstance it is assumed, that the blood discharged, *per anum*, must have come from that viscus. This will be allowed to be very infirm ground for such a supposition; besides patho-

logy can receive no assistance from the appearances in a single case. The liver was quite natural in its texture and bulk, and it is stated that the contents of the abdomen were perfectly healthy. I confess, I feel inclined to inquire, whether the internal surface of the bowels was examined throughout? as there is reason to fear, that in such examinations, this minute inspection of *the internal surface* of the *whole* of the bowels is too often neglected. In the second case, which occurred in a woman aged seventy-five, it is said, "the same appearances were exhibited as in the former case." Here, however, we are informed, that the intestines appeared equally blanched with the liver. Indeed, nothing remarkable presented itself, but the general deficiency of blood in the thoracic and abdominal viscera; but from this Dr Ayre concludes, that the hæmorrhage certainly took place from the liver!—"This organ was completely emptied of its blood, as well as the right auricle and ventricle of the heart, and the large veins leading to it. The structure of the liver, and all the other organs, notwithstanding her age, appeared healthy. Both the liver and intestines had a blanched appearance. *The latter were lined throughout with a dark-coloured slimy matter, similar to what was passed after the hæmorrhage stopped.*"* Is not the last sentence unfavourable to the author's hypothesis?

* Practical Observations on Disorders of the Liver, by Dr Ayre, page 29, et seq.

Does it not afford evidence of the disordered, and highly excited state of the internal surface of the intestines, and strengthen the probability of the bleeding having been derived from them?

I believe these cases of Dr Ayre, and his reasoning, will generally be considered very meagre support to his opinions on this subject, after the *facts* brought forward above in confirmation of the reality of a quite contrary sentiment. We have seen, that frequently in these affections, blood is discharged from the mucous membrane of the mouth, affording presumptive proof of the same membrane lining the stomach and bowels being the true seat of the disorder, which gives rise to vomiting and purging of blood; since a variety of facts show that this membrane, from its continuity of surface, is liable to be similarly affected through its whole extent, and therefore the affection of the mouth becomes an index to the state of the stomach and bowels. We have likewise found that the results of M. Andral's indefatigable attention to disorders and disease of the abdominal viscera, and of his extensive experience therein, is, that when the dejections are bloody, we may be satisfied the intestines are, for the most part, the seat of more or less intense inflammation. That Mr Abernethy has almost invariably found disease in the large intestines after death, under such circumstances, in the numerous examinations he has made; their villous coat being swollen, pulpy, and tinged with blood. That in the concentrated en-

demic fever of warm climates, where vomiting and purging of blood are so frequent and alarming, and the stools look like tar or molasses, the proofs of the exceeding severity of the intestinal disease are incontrovertible. And that the protracted experience of M. Portal convinces him, that the blood may be seen in such states transuding from the blood-vessels of the alimentary canal, after death, which perfectly accords with the observations of Mr Howship. These are multiplied proofs of the paramount intensity of intestinal irritation; and in their number and weight, they form a striking contrast to the scanty testimonies, and gratuitous assumptions of those, who will still harp on the insensible liver, and who can see little else than an affection of this organ in all abdominal disorders.

Dr Ayre's book on marasmus, in assigning that state of body as possessing its common origin chiefly or exclusively in liver disorder, appears to me to carry us far backward in pathology. The chief feature of it is a distorted one; and if it has met with that favourable reception from the profession, which some seem to assert it has, I cannot but consider it as another proof of the false light which overhangs this part of medicine in our country. Marasmus is much oftener met with as consecutive to intestinal irritation and disease, than to hepatic affection; and it is to the first of these evils we are to look for the most exquisite examples of this species of consumption. The following case exhibits the principal features of this malady, as it

commonly occurs, with the most usual appearances on dissection. We are here presented with a series of phenomena, which, Dr Ayre would have said, had their origin in the disordered action of the liver; but which the knife of the anatomist proves to be dependant upon intestinal lesion alone; and I appeal to familiar experience to verify what I advance, that the symptoms and morbid appearances of this case may be safely received, as exhibiting those which accompany and constitute ordinary marasmus, when it terminates fatally. The diarrhœa, and the light clay-colour of the stools at one period, would no doubt have been considered by the abettors of the bilious theory, as conclusive on the subject of the disorder's being chiefly, or altogether, one of the liver; but we find this organ to be healthy, and that the morbid phenomena were confined to the bowels.

"Master M., a child of three years old, was at school in good health till January 1810, when he became poorly, and was supposed to have taken cold. His appetite was impaired, and his bowels were relaxed. This, however, was scarcely noticed for some time. He enjoyed his usual amusements, and it was expected his complaints would wear off again. After some weeks, however, the child was sent home with a severe diarrhœa, the abdomen much swelled, and at times very painful. When sent to school he was a very hearty and strong child, but on his return was much altered, weak,

and emaciated. As the disorder continued to increase, he became heated in the skin."

During the existence of these symptoms, the child was improperly treated, by a very ignorant apothecary, being stuffed with mutton chops, beef steaks, and porter—the apothecary declaring that he would soon recover: but instead of this, he grew worse and worse, till his case was pronounced by the same man to be hopeless. "He still continued to grow thinner, and the fever, which was at first occasional, now became constant. The diarrhœa, however, was apparently on the decline, and this seemed to afford a ray of hope. The motions were, on some days, not more frequent than natural, but every now and then violent fits of restlessness and crying came on, and he complained of the 'belly-ache.'

"The abdomen was exceedingly tumid and hard, and excessively painful whenever in the slightest degree pressed. His water was observed to be becoming high-coloured; it was also rendered in diminished quantity. The appearance of his stools had changed; they were of a light clay-colour, as usually observed in disorders where the bile is prevented from flowing into the intestine. He had once, about this period, a sickness at the stomach, with vomiting; on which occasion the matter thrown up was found exactly to resemble, in smell and appearance, that which was passed by stool.

"At this time, I was first desired to see the

child. The body was reduced almost to a shadow, the belly much swollen, very tense, and extremely painful. There was an obscure fluctuation in the abdomen. The motions were at this time less frequent than in health. The child was perfectly sensible, and always called for his chair, when necessary. The pulse was pretty good, and beat 120 in a minute, but the little remaining appetite had now failed, so that he took nothing."

A suitable treatment was now instituted, but, after languishing a few days, he expired.

"Examination.

"The body was inconceivably emaciated. On laying open the abdomen, the peritoneum was found in many parts adherent to the viscera. The omentum was considerably thickened by inflammation and disease. The whole bundle of intestines was found involved in one confused mass of adhesions. This had been consequent to a very extensive effusion of coagulable lymph into the cavity of the abdomen, in which was also a quantity of serous fluid, that was removed in the course of the examination.

"This mass of coagulated lymph was next cut into, when a quantity of brownish red fluid gushed forth, and with it the skins of some raisins. This circumstance proved, that some parts of the coats of the intestines had given way. The incision was then extended, so as to expose more perfectly

the cavity of this preternatural cyst; by this means, a circular hole, about a quarter of an inch in diameter, was discovered in the side of the small intestine. From this, the contents of the bowels had, in the first instance, escaped, and by it the fluids still ran freely out."

* * * * * *

"On closer examination, the villous coat of the small intestines was in several places found to be destroyed by ulceration; but in no part, except where the opening had been already detected, was the ulceration deeper than the muscular coat of the bowel."*

Dr Pemberton called the marasmus of children, the infantile remittent fever,† and considered it dependant upon derangement of the bowels. He, however, professed himself ignorant of the pathological anatomy of the abdominal viscera, in this disorder, from not having enjoyed sufficient opportunities of examining the bodies of those who died of the complaint; but he has noticed one fatal case of this description, at the examination of which he was present. Here all the solid viscera of the abdomen were healthy, and the bowels were evidently the chief seat of the affection. Still, nothing

* Howship's Observations in Surgery and Morbid Anatomy, page 264.

† Treatise on the Diseases of the Abdominal Viscera, page 158.

is said by him of the state of the internal surface of the intestines; probably, they were not examined, at least, with the care and attention that is desirable, in every such affection, as the phenomena immediately visible on removing the abdominal muscles, &c. render it probable, that inflammation, or some organic lesion, would have been discovered in their mucous membrane, had it been so examined. The subject of the case was a child of four years old; and Dr Pemberton remarks, "the belly was swelled to a very large size, but there was not the least appearance of inflammation on the peritoneum, or upon any of the viscera of the abdomen, or any fluid in the cavity. The liver, pancreas, spleen, and kidneys, were natural; the mæsenteric glands were in a small degree enlarged:—*The intestines were distended to an enormous size, so that the colon measured seven inches in circumference, and all the other intestines were, in like manner, greatly distended.*"*

When the stools are white, the secretion of bile is unquestionably suppressed; or, if secreted, it is prevented passing into the duodenum; but the copious, frothy stools, which look like a quantity of yeast, or resembling soft pudding, seem essentially connected with a very disordered or diseased condition of the bowels, especially the larger bowels; and the appearances presented, on

* Treatise on the Diseases of the Abdominal Viscera, page 167.

dissection of several fatal cases, set this question quite at rest.*

Dr Blackall has favoured us with a very interesting case, where the patient voided, during life, large quantities of a matter resembling yeast, in colour, fluidity, and effervescence. The man was supposed to have a *liver complaint*, and mercury was accordingly given to him; by its effect on the internal surface of the bowels, he mended a little under its use, but afterwards relapsed, and died; when dissection showed, that the mischief had its seat in the bowels only, the liver being healthy. He suffered altogether more from flatulency, dyspepsia, and dejection of spirits, than from any precise pain: sometimes, however, when questioned, he would acknowledge an obscure uneasiness and fulness towards the lower part of the abdomen, on the right side. "The liver was natural, both in size and structure, and the gall-bladder full of a yellow healthy bile; but on tracing the intestines, we found the cæcum, and its appendix with some of the neighbouring parts, involved in a mass of scrofulous adhesions, which, when taken out, and dissected at leisure, presented the following appearance:—The disease began

* A very dangerous and not unfrequent error is that of referring to a disordered liver to explain the cause of those mucous and gelatinous discharges from the bowels, proceeding solely from disease seated in the tract of the large intestine consisting ordinarily of high irritation or inflammation in one or more of the tissues.—*Edit.*

about two inches above the termination of the ileum. Its inner membrane was, to the extent of a crown-piece, covered with spots of lymph, and there were two or three small ulcers. The whole of the inner membrane of the cæcum was completely destroyed by ulceration, and its other coats much thickened; the beginning of the colon was in the same state, for five or six inches further nearly healthy, and then again, for a short space, thickened and ulcerated, in a spot where, by a sort of unusual course of the intestine, it had doubled down upon the cæcum." Dr Blackall adds, "I apprehend a slight degree of this disease to be not unusual. I have seen four cases of it to an extraordinary extent, where the discharges, by stool, greatly resembled yeast in their appearance, and, in one instance, were nearly raised by their effervescence over the sides of the vessel. All the patients had this in common, that they died extremely emaciated, and after a most tedious lingering. In all there was much flatulency, and in some, a croaking noise of air, apparently, seated in the ascending arch of the colon, and sometimes producing such a projection there, as almost to give suspicion of a ventral hernia:" symptoms, I presume, strongly indicative of intestinal disease. It is very correctly observed by this judicious physician:—"Writers describe this remarkable complaint imperfectly, and, when they notice the occurrence of yeasty discharges, they generally seem to refer them to an obstruction of the liver

exclusively. But many circumstances, particularly the preceding dissection, prove the large intestines to be much engaged in this disorder."*

In the Medical Repository for October 1822, there is the following:—"We had, last year, an opportunity of inspecting the body of a naval officer, who had served long in the West Indies, and who died, at an advanced period of life, of diarrhœa gypsata. On dissection, the liver was found tuberculated, the spleen enlarged, and condensed in structure; the pancreas was much enlarged, and presented the appearance of incipient schirrus, in more than one part. The mucous coat of the digestive canal, *from the mouth to the anus*, presented marks of disease, which were greater in some situations than in others. It was generally more vascular than natural, and, in many places, was inflamed and ulcerated. The inflamed parts surrounding the ulcerations were much thickened. The muciferous, or follicular glands, possessed a dirty-grey colour, and were enlarged to various sizes, so as to give, in some places, a granulated appearance to the mucous surface; in others, a number of small ulcers were dispersed through it, apparently in the situation of the orifices of the mucous glands. These ulcers penetrated deeply into the villous coat, and were in some parts, distinct; in others, they coalesced, and gave rise to

* Dr Blackall's valuable Observations on Dropsy, page 108, et seq. (1813).

extensive ulcerations, with thickened and inverted edges, or to a foul, dark and rugged condition of the internal tunic. These lesions were more extensive in the rectum, colon, lower part of the ileum, duodenum, in the vicinity of the pylorus, in the pharynx, and more slightly in the jejunum, and commencement of the ileum. The florid, thickened, ulcerated states of the palate and fauces, were apparent for some time before the death of the patient."

The editors of the above journal have been led to take the same view of the pathology of this peculiar kind of diarrhœa, as is here maintained. On this subject, they wisely differ from Dr Good* (who is evidently too fond of making the liver a capacious vortex of disease), observing, that from the character of these derangements, as well as from other circumstances, they have concluded the disease to be essentially one of the follicular glands of the intestines, from its commencement, which terminates in their enlargement and ulceration; and that the alvine dejections are characterized by the copious, and vitiated secretion to which their disorder gives rise. They had two cases of this disorder under treatment, when this case was written, neither of which had received any benefit from the active remedies prescribed.

Not only does an impartial consideration of the attending phenomena, and of the economy of the

* See his "Study of Medicine," vol. i.

digestive tube, contrasted with that of the liver, lead to the conclusion, that, for the most part, all the cases of abdominal disorder, in which copious stools of either black, yeasty, bloody, or any other coloured matter are conspicuous, are essentially connected with a permanent excess of irritability in the intestines, wholly independent of the state of the liver; but I believe the dissections of the many fatal examples on record more than bear me out in the assertion. In a considerable majority of these instances, the liver presented no traces of disease or inflammation, while the organic lesions of the intestines were almost invariably present; —either simple inflammation, of various shades; thickening or softening of one or more of the coats; tubercles; or ulcerations, being conspicuous, and not seldom unaccompanied by disorganization in any other of the abdominal viscera. The causes, symptoms, and post mortem appearances of ordinary diarrhœa, dysentery and lientery, I consider as clearly pointing them out to be originally diseases of the mucous surface of the bowels; the liver, if disordered, being affected secondarily. The same may be affirmed of cholera morbus.* These being complaints remarkable for the quan-

* The following quotation from my Treatise, entitled "*Modern Domestic Medicine*," third edition, page 265, fully explains my sentiments in respect to the real seat and character of cholera.

"It has been usual with medical writers to consider severe affection of the liver, or of the bile ducts, to be the immediate cause of cholera (in other words, in what the disease essentially

tity of the intestinal discharges that take place under them, they lend important proof from analogy, of the correctness of the pathology here advanced, of the disorders which form the subject of consideration in these pages.

M. Andral Jun., whose laborious and extensive researches on the pathological anatomy of the digestive tube, entitle his sentiments on this point to much deference and attention, remarks, that

consists), but the present author is convinced, that it is really owing to high irritation and spasm of the stomach and small intestines, for nothing can explain the severity of the symptoms in this disease, the extensive chain of influence excited, and the complete exhaustion of the living principle, which sometimes occurs with astonishing rapidity, but the supposition of such a condition of these very sensible and important organs. The imperfect organization of the liver and bile ducts, their dull sensibility, and their confined sympathies, are so apparent, as to render it impossible for us satisfactorily to account for these phenomena by any imagined spasm centered in them."

In regard to the nature of cholera, Dr Good observes (Study of Medicine, vol. i, page 268), "The general battery of symptoms appears, therefore, to have been opened by a spasmodic constriction of the bile ducts." Further on (page 273) he is, however, compelled to add, "It still remains to be ascertained why an affection of the liver, or of the bile ducts, should be capable of exciting so extensive a chain of influence on the nervous, rather than on any other system." In the copy which I possess of Dr Good's work, I find on referring to it at this time, that I had pencilled in the margin opposite to the former quotation, the following observations, which I would transcribe into these pages. "If we reverse what is here said of the relative condition of the biliary organs, and the alimentary canal, and consider the 'general battery of symptoms' to have been opened by high irritation and spasm of the latter, the former participating in it, and therefore becoming obstructed, we shall certainly approach much nearer the truth."

diarrhœa, dysentery, and lientery, have been for a long time looked upon as diseases entirely independent of intestinal inflammation; but it is indubitable, that in a very large majority of cases, the intestines of individuals labouring under diarrhœa, whether complicated or not, with dysenteric symptoms, present evident marks of phlegmasia. And he further judiciously observes, that dissection establishes the fact that the same kind of organic lesions in the intestines will in some persons produce dysentery; in others, diarrhœa.

An objection has been raised to the idea of the yeasty, dark, black motions, frequently voided in the prevailing disorders of the digestive organs, being vitiated secretions from the bowels; because all the secretions poured into the intestines, or supplied by them, except the bile, are for the most part colourless: and it has therefore been urged, that any change from the natural appearance which takes place in the fæces, must result from a change of the bile. The former assertion is true, if it be confined to a state of health; but how completely is it invalidated by familiar experience, if it be meant to apply also to a diseased condition. The urethra of a healthy man secretes a colourless, limpid fluid; but when irritated and disordered, its secretions become white, yellow, or green, opaque and stinking. The same change takes place under disorder in the serous membrane lining the chest, whose healthy secretions are without colour; and so it is with the secreting membrane of

the bowels, and of every other part. In health, their secretions are for the most part colourless, but no bounds can be set to the change they may undergo when exposed to irritation: then they are, at different times, found of all colours, from the pure inodorous white to the concentrated offensive black. It is not a little surprising, therefore, that the colour of the secretions of a healthy part should be brought forward to prove that the same appearances are exhibited by them under disorder and disease.

We have enumerated the power which mercury possesses, in restoring unnatural stools to their healthy appearance, among the causes of the supposed frequency of liver complaints. The opinion which has much prevailed of late in the profession, that this mineral exercises a specific action on the liver, far more immediate and efficient than it exercises on any other secreting organ, is an error that is grown out of the striking change often produced by it in discoloured, offensive motions, and from its almost exclusive influence over the acute bilious disorders of India. If it is shown in these pages, that such unnatural alvine evacuations are much more closely connected with an unhealthy state of the internal membrane of the bowels than with disorder of the hepatic viscus, it has been proved, that the notion that mercury exerts a greater power over the secretions of the latter, than it does over those of the former, derives no foundation or strength from the signal change in the

stools just alluded to. In the acute *bilious* disorders of India (as they are called), calomel is unquestionably superior to every other remedy. In them it certainly seems to originate specific effects and requires to be employed in large, quickly repeated doses; but nothing satisfactory can be deduced from this circumstance, in regard to its having a more direct and powerful influence on the liver, than on the intestines and mesentery, in the ordinary chronic maladies of the abdominal viscera met with in this country; for independent of the sensible and great difference in the complexion and severity of these affections of the two climates, my researches lead me naturally to question, whether this unequalled efficacy of calomel, in the diseases of the East, is owing to any such superior operation on the liver. Its use in acute hepatitis is certainly dependent upon an operation of this kind, but cholera morbus and dysentery, two of the most frequent and dangerous diseases of that region, and in which the powers of mercury are equally conspicuous, are affections of the alimentary canal; and it appears incontrovertible, that in the endemic fevers also of India, which may likewise be affirmed of the fevers of the West Indies, it is disease of the mucous surface of the digestive tube, that is principally concerned in producing the symptoms visible under the attacks, since the epigastric and umbilical regions are the principal foci of uneasiness and irritation, and this tube generally presents, on dissection, the most intense appearances of or-

ganic lesion, and sometimes none are found elsewhere. I think it will not be said by medical men of correct observation, after due reflection on the results which have followed their employment of mercury in different abdominal maladies, that, in actual practice, they have found it possess a greater curative power over unequivocal disorder or disease of the biliary organs, than it has in a similar condition of the intestines. The *disorders*, popularly termed bilious, in reality have their seat in the stomach and bowels; and if the mercurial oxides are commonly of imperfect use in intestinal disease,* it should be remembered also, that in *disease* of the liver, it is no longer a doubt whether they are of much or little service.

The real fact is, that this mineral generally possesses, in a higher degree than any other known medicine, the power of changing the condition of action in the extreme vessels of the circulating system throughout; it is for this reason, that it is so important an instrument in the hands of the physician in so many and apparently dissimilar complaints; and it is proved by experience, to exert no greater influence over the secreting vessels of the liver, than it does over those of the intestines and mesentery.†

* It should be remarked, that I here speak of positive or organic disease.

† It would appear, that the rationale of the operation of calomel is so imperfectly understood, as to occasion much apparent inconsistency in regard to its use. We find it denounced by our

3. Of all our organs, the stomach is that which in general the most effectually resists positive disease. It will sustain considerable irritation and disorder for a long series of years, without undergoing any alteration in its structure; but, from the

author in one place as a "highly stimulating agent," whilst here it is held up as unquestionably superior to every other remedy in the acute bilious disorders of India, when "employed in large, quickly repeated doses."

So far as our observation extends, calomel is the only article in the class of purgatives which may be advantageously administered in acute diseases where the first passages are the seats of irritation and even inflammation. In such cases instead of aggravating the symptoms, as every other cathartic with which we are acquainted would do, its immediate effect, when given alone, is generally to reduce diseased action and allay irritation. Applied externally to irritated and inflamed surfaces, calomel often exerts the most positive soothing effects. We have often witnessed these in hepatic and other cutaneous affections, and when employed as an injection in gonorrhœa. We are sensible that in the present condition of our knowledge of the modus operandi of medicines, the facts here adduced must appear at variance with the new medical doctrines, for which we profess a high regard, but as we never can be persuaded to abandon well demonstrated facts, we shall trust to further illumination from physiological sources to clear away the mystery.

Our remarks are intended to apply more particularly to the medicine when administered with a view to its immediate advantages in acute diseases, and not to its operation when prescribed as an alterative, the rationale of which we conceive to be of a totally different kind. The secondary effects of this medicine, such for example as the general irritation and salivation, so apt to ensue upon the subsidence of the disease for which it may have been administered, constitute a most formidable objection to its common employment. Happily, its use in all ordinary cases can be dispensed with, and physiological medicine supplies us with resources, which make it seldom requisite to resort to a remedy that may ultimately prove dangerous.—*Edit.*

liver possessing only very inferior vital properties, it is much less able to resist the disorganizing influence of irregular or violent action; and as it participates in the disorders of the first and second stomach, disease from this cause frequently fastens upon it alone, and the existing complication of evils sometimes terminates in death. Upon the dissection of bodies thus affected, the liver will present appearances of disease, when there are no traces of it in the stomach or duodenum, and very few and slight ones in the other abdominal viscera. This occurrence, particularly when the patient's symptoms during life did not clearly denote the existence of hepatic mischief, which not unfrequently happens, has confirmed many of the profession in the popular notion of the exceeding prevalence of *liver complaints*, and has been another cause of increasing and perpetuating the error. The difficulty with which disorganization is induced in one, and the greater facility with which it originates in the other organ is forgotten; and, therefore, the relation which the above mentioned circumstances bear to each other, as cause and effect, is unperceived and reversed. Instead of the organic injury of the liver being considered a consequence of long continued and severe derangement of the stomachic functions, it is regarded as an original, independent affection, and sometimes, even as the sole complaint, notwithstanding that the stomachic irritation may almost always be recognized during life, as the primary malady, existing long before

symptoms supervene, which decidedly denote hepatic mischief:—thus, *liver complaint* still engrosses the attention of the practitioner, and presents itself to his imagination on all such occasions in the living subject; and this reversion of causes, drawn with confidence from actual dissection, stands as a humiliating memento of the fallibility of medical evidence, when the physician has a favourite hypothesis to support.

I think there can be no difficulty in conceiving that disorder, or disease, may and does often exist for some time in the liver, without the stomach participating, and without the bowels being very sensibly affected; but it does not consist with our physiological knowledge, or with observation, to suppose that the reverse of this ever occurs. The insensibility, and the natural functions of the former organ, encourage this conclusion; besides, it is admitted, that we are not unfrequently surprised in finding marked disease in the liver after death, when the patient during life manifested no symptoms of such complaint: this gland is one of waste rather than of supply; and it is reasonable to infer, therefore, that a partial interruption or irregularity in its healthy actions may be borne, for no short period, with little injury, and without its sensibly influencing the functions of the other assimilating viscera. Not so with the stomach, and small intestines. They are organs of remarkable supply, of the most delicate and extensive connexions, and are the most irritable parts of the body; in conse-

quence of which, they cannot be disordered without involving the liver in the same morbid association; and it is particularly worthy of attention in our day, that this is ordinarily the natural course of invasions in the disorders under review.

Mr Abernethy, whose great improvemnts in his profession, demand and engage general attention, with all his attachment to affections of the chylopoietic viscera, and partiality for blue pill, is not one of those who consider the liver to be the root of the evil in these disorders. If I understand him right, instead of considering this organ to be the chief and primary seat of invasion, as is generally done, he takes that view of the subject which I would urge upon public attention, regarding the stomach as commonly the first affected, then the intestinal canal, and lastly the liver. He remarks, "when digestion is imperfectly performed, the functions of the intestinal canal will soon participate in the disorder of the stomach. *Under these circumstances*, the secretion of bile will also probably become irregular." Again, "It is fair to infer, that where general disorder of the digestive organs takes place, those fluids which produce the changes which the food undergoes in them, are deficient or depraved; and consequently, that digestion and the subsequent processes must be imperfectly performed. The liver is likely to participate in the disorder, and the biliary secretion to be diminished or vitiated. This circumstance admits of ocular demonstration: and I have, therefore,

considered it as an evidence of a more or less general disorder of the digestive organs. A very reasonable objection may, however, be made to considering the derangement of the function of the liver as a criterion of those of the stomach and intestines; since the liver is independent of the latter organs, and may be the subject of a disorder confined to itself. In some cases, also, the alimentary canal may be affected without disturbing the liver. Such circumstances may happen occasionally; but they are not ordinary occurrences, and should be considered as exceptions to general rules, which do not militate against their common operation. *In general, affections of the former influence the functions of the latter.*"*

There is reason to fear, from the almost exclusive attention paid of late to the liver, that, in conducting the dissections in such cases, the state of the digestive tube has been very often either partially or wholly disregarded. These examinations have been made in a way likely to propagate the belief of the universal spread of disordered and diseased liver, but not calculated to show the real state of the whole of the organs concerned, and the relative frequency of intestinal disease. If the biliary organs have been found injured in their structure, it has been too frequently considered sufficient to account for every symptom

* Observations on the Constitutional Origin of Local Diseases, page 42.

that occurred during life; nothing was thought worthy of particular notice in the abdominal cavity after this, and the dissection has accordingly been hastily concluded. Had less attention been directed to these parts and more to the intestines, in examining the bodies of individuals who have died from a diseased condition of the assimilating viscera, the relative state of the latter would be better known, and have gained due attention. "It has frequently happened to us, to find the mucous membrane evidently inflamed, disorganized, and ulcerated, in portions of the intestines which, when seen and examined externally, had been regarded as healthy. An important error may therefore be committed, if, as is sometimes done, we pretend to judge of the healthy or morbid condition of the intestine by the appearance of its external surface."*

From what has now been said respecting the appearance of organic injury of the liver, in protracted disorders of the digestive organs, it must not be supposed that this is a common occurrence, in the examples we daily meet with of these multiform complaints, the great proportion of which are of recent origin. I could not pass by the fact of disorganization being sometimes found in this viscus in these cases, when there is no such thing elsewhere in the abdomen, without adverting to it as a cause of increasing, among the profession,

* M. Andral, Jun.

the idea of the great frequency of this disease; but as I believe it may be safely asserted, that fifteen cases out of sixteen, of what are popularly termed bilious complaints, are disorders of the digestive canal; so I think it indisputable, that in four cases out of five, of what are usually designated confirmed liver diseases, there is no positive disease in the hepatic region, the affections being examples either of aggravated functional disorder of the stomach and intestines, or of disease in some part or parts of their course. When chronic inflammation, induration, ulceration, or any other organic lesion, does supervene an unhealthy condition of these parts, I think morbid anatomy proves, that such consequences are much more frequently recognized in the bowels, than in the gland secreting the bile. Among the several persons examined by Mr Abernethy, and referred to at page the fifty-fourth of this Essay, it was only *in some* cases the liver was diseased, whereas such a condition occurred *in every* instance in the intestinal canal, and was there of great extent and severity. In other instances, alluded to at page the forty-seventh of his Observations, there existed intense disorganization in the intestines, but no mention is made of any unhealthy state of the liver. It is more than probable that Dr Blackall's five cases (see page the seventy-ninth) were all of this character. We are certain one of them was so (and in this mercury was administered under the idea of liver disease), and we are autho-

rized to conclude the rest were of the same nature, from the exact similarity of their symptoms and termination. In Mr Howship's observations on disorders of the lower bowels, five cases are related, in which abdominal pain and uneasiness, anorexia, debility, emaciation, and frequent copious stools of bilious, dark, offensive matter, were the prominent symptoms. They are correct specimens of what are now very frequently considered liver complaints; but on dissection, disease was ascertained to be confined to the bowels, the liver being unaffected.

The best continental writers on abdominal derangements are unable to embrace the English notion of the paramount frequency and importance of liver disorder or disease. The laborious observations of Broussais, Andral, and others, have made them acquainted with the frequency of intestinal lesions; but the liver has comparatively seldom been found by them thus invaded. They have uniformly been struck with the severe, complex, and extensive morbid actions, constantly arising from gastric and bowel disorder; but they have yet to learn, that actions, still more intense and complicated, unfailingly attend upon hepatic derangement. In this point, I think that the French and German practitioners, as a body, are superior to us, and the reason is obvious. In their practice and researches, they are not misled by bilious theories, and notions of the omnipotent powers of calomel, and consequently they have not

fallen into those misconceptions which, from the present fashionable opinions in England, prevail among us.*

The late Dr James Curry, who, regarding almost every patient with "jaundiced eye," could see little affecting them but liver disease, was in the habit of putting his hand to his right side, and saying, he was assured there was a very small portion of liver left there. Some might think it was not wise in him to make so frequent a confession of this kind, since, if a man could live for years in tolerable health (which was his case), with only a very small portion of liver, and that probably in a state far from healthy, the conclusion generally drawn from thence would be in no small degree unfavourable to the doctor's opinion, of the supreme importance of the healthful actions of this viscus, and of the absolute necessity of restoring to the free use of calomel in its derangements. However, he was totally mistaken in his own case, for after death the liver was found to be quite sound! —a circumstance not much in favour of his discriminating powers. Yet authors are not wanting, who speak of the practical success of this physician, attributing it to his superior acquaintance with hepatic disorders. To me, this success and discernment appear equally problematical. I know of more than a few who have fallen victims to his

* A most magnanimous avowal, showing a mind divested of prejudice and capable of receiving opinions if well sustained, even when these proceed from successful rivals.—*Edit.*

practice, but am not informed of any who have been restored to health by its effects.*

Dr James Hamilton, Jun. in his very useful observations on the use and abuse of mercury, observes, "As it is the object of the author to improve the science of medicine, and not to expose the errors of individuals who practice it, he avoids mentioning many instances which have fallen under his observation, where patients were pronounced to be labouring under an affection of the liver upon the most superficial inquiry into the symptoms. One old lady, nearly seventy years of age, was actually put upon a severe course of mercury by a physician, who declared that he felt her liver to be enlarged, though the examination was made while she lay on her left side in bed, and without removing her dress, which consisted of a thick flannel shift, besides the ordinary linen one. In this case, however, the liver proved to be quite sound." I have lately seen an instance almost precisely similar, and my experience painfully convinces me, that the occurrence referred to in the former part of this extract is sufficiently common. Dr Hall remarks, "I have this day had the opportunity of ascertaining, by a careful dissection, that in a case of mimosis decolor, long considered a case of 'liver complaint,' there was no perceptible disease of that or any other viscus."†

* We could here introduce the case of at least one other eminent physician who fell a victim to the *hepatic* prejudices entertained by himself and medical advisers.—*Edit.*

† Essay on the Mimoses, page 142.

Mr Abernethy and Dr Hamilton, Sen. have given to the intestinal canal, their full share of effect in the prevailing *bilious* disorders, and their treatment is rationally directed towards obtaining healthy secretions from them. They believe, that the unhealthy colour of the fæces, and all the prominent symptoms of indigestion, are intimately connected with an unhealthy condition of the alimentary secretions; and their mode of cure rests upon the principle, that "the state of the bowels has an important and remarkable influence over that of the stomach, of the internal mouth, of the external surface, of the circulation, and of almost every organ of the human frame."* How far removed is this view of the nature of those disorders of the general health, now so very prevalent, from that commonly taken, in which the liver has an unreasonable degree of importance attached to it. And how different this principle of cure from that too generally acted upon, in which large and reiterated doses of a debilitating, and highly stimulant mercurial, are resorted to!—a means, it is conceived, not very well adapted to restore the impaired energies, and natural secretions of any organ.

4. The great number of our countrymen who

* Hall on diagnosis, first part, page 129. This sensible and accurate writer justly observes, "A deranged state *of the bowels* may be deemed the fertile and immediate source of most disorders of function, and the more remote cause of many organic diseases."

annually return from the East and West Indies with disorder, or disease, in the biliary organs, and the exclusive influence of mercury over the acute diseases of India, have likewise operated, in no mean degree, as causes in the spread of what may very properly be termed the bilious mania. Man is prone, especially in medicine, to form erroneous associations. Persons returning from India are naturally led to talk of the universal nature and great fatality of liver diseases in that country, and to extol the inestimable value of calomel; hence, they readily imagine every considerable disorder of the digestive organs, which they meet with among their friends and acquaintances in England, to be no other than a *liver complaint;* and suppose, that the medicine from which they have so often derived immediate and striking relief under an almost vertical sun, must prove the most suitable and powerful remedy also to their friends at home. The valetudinary are not seldom prevailed upon to receive these crude notions, and to pursue the practice to which they directly lead. The individuals, giving and receiving this information, forget the vast difference existing between the climate of Great Britain and that of India, and are ignorant of the powerful impression produced by climate, on animal as well as vegetable life. They are not aware how widely the ordinary diseases of the two countries differ from each other in character; those of tropical regions being for the most part extremely acute, and demanding the prompt

and vigorous employment of very active measures; while those under view, in temperate climates, are generally rather chronic than acute, indicating no immediate danger. This applies especially to the biliary organs. Reiterated experience evinces, that those who reside within the tropics bear and sometimes, indeed, require much larger doses of mercury than can be administered with safety to those, who inhabit cold or temperate latitudes; and that much more striking benefit attaches to so free a use of it in the diseases of the former, than can be obtained from the most judicious administration of it in those of the latter. The blue pill, which we find so valuable at home, is useless in the East Indies; whereas, twenty-grain doses of calomel, which no English practitioner would be justified in prescribing, unless in urgent cases, and under peculiar circumstances that very rarely occur, are often ordered in India, twice, or thrice, or even oftener in the twenty-four hours, and with admirable effect*.

* In the United States, and especially in those states situated towards the south and west, a physician often rises in celebrity in proportion to the magnitude of the doses of calomel, which he ordinarily prescribes. Notwithstanding the temerity of such a practice, the patients often recover from the diseases with which they were attacked, and the calomel so *skilfully* administered gets the credit of the cure. Should the patient subsequently suffer the horrors of a mercurial fever, and a salivation which perhaps causes the palate and gums to slough, and the teeth to become loose or even drop out, the chance is that the physician will get more praise than censure, since it will be inferred that in all probability death would have ensued but for the salivation.

As an instance of the powerful influence of climate, in modifying the operation of remedies, it will not be improper to notice the fact, that the doses of medicines given in England, excite universal astonishment among the faculty in Italy. The extract of henbane is usually administered among us in doses of five grains, three times a day, or oftener; yet Dr Harrison in a letter to Dr Paris observes, that when he gave it in Italy to the extent of three grains thrice a day, it produced, in two patients, a temporary amaurosis, or loss of sight, "which disappeared, and again recurred, on the alternate suspension and administration of this medicine: and it deserves particular notice, that these very patients had been in the habit of taking similar doses of the same remedy in England, without any unpleasant result. Now, that this depended upon an increased susceptibility of the patient in the warmer climate, rather than an increased power in the remedy, is unquestionable, since the extract which was administered in Italy had been procured from London."*

5. For several years past, there have been medical men of talent and character, both physicians and surgeons, who after a residence of some years in the

From the appearances of some of the living monuments of that practice which are by no means rare, we think that they purchased existence at a dear rate. Of this much we are certain, that the very kind of cases in which calomel in large doses would by many be regarded as indispensable, yield to a more rational treatment where there is no risk of subsequent danger.—*Edit.*

* Paris's Pharmacologia, vol. i.

East and West Indies, have returned to practice in their native country. They have had to encounter, almost daily, the most formidable affections of the liver, and alimentary canal, abroad; and have grown much attached to calomel, from its excellent and unequalled powers in those diseases. Upon returning to England, they have unfortunately considered the liver to be the root of the mischief, in the greater number of the disorders of this country, as well as in those of India, and have therefore used calomel with great freedom, in their subsequent practice at home; and, by their writings and representations, have prevailed upon a large proportion of us to embrace their opinions, and adopt their mode of treatment. These opinions and the manner of cure have been indefinitely and injudiciously described, and still more vaguely imbibed. In regard to the seat of the evil, what applies, in truth, to the alimentary canal, has been from plausible, though insufficient reasoning, assigned to the liver; and, in point of treatment, that which is suitable, with any force, only to acute invasions, has likewise been extended unhappily to chronic affections. This is a principal cause of *bilious* disorders, and their remedy, calomel, becoming so highly fashionable in this country.

These gentlemen have fallen into the same error as their unprofessional brethren from India, in disregarding the great difference in the two climates, and in the effects of remedies uniformly resulting

therefrom. It is strange and surprising how professional men of ability should imagine, that because chronic hepatitis is a prominent disease in the East and West Indies, it must be so likewise in England. With as much reason might it be supposed, that pulmonary consumption, which is so pre-eminently destructive throughout Europe, is also a wide-spreading and fatal complaint within the tropics.

Yellowness of the eyes has often been considered a certain sign of diseased liver, and the same may be said of a sallow or yellow hue of the complexion; but these symptoms are very frequently seen, when functional disorder exists in the stomach and bowels only. That they are not to be depended upon, as proofs of positive disease in the liver, is certain from such cases having been seen, where neither yellowness of the eyes or skin were present,—instances of which are related in the writings of Dr Farre and Dr Blackall. It appears to me, that these symptoms have been too hastily supposed to indicate, at least, considerable disorder in the biliary organs, with more or less of obstruction there; for where such symptoms were observable, dissection has failed, in many instances, to discover vestiges of these irregularities, while marks of great disorder have been visible in the intestines, and appearances of the absorption of bile from that canal were decisive. Hence we are led to believe, that jaundice and yellowness of the eyes are not unfrequently consequences of bowel

derangement, unaccompanied with any alteration in the qualities of the bile:—under such circumstances, this fluid is secreted in a healthy state, but from an unnatural condition of the bowels, they do not effect that change in it which takes place in health; and it would appear, that they are moreover so affected as to absorb it from their surface, and thus it enters with the chyle into the mass of circulating blood.* Dr Scudamore enumerates a general sallowness, or partial stains of yellow in the skin, as the occasional symptoms of indigestion in the intestinal canal;† and Dr Hall is persuaded, that jaundice, and a continued though variable state of sallowness—of yellowness or jaundiced hue, very frequently accompanies both the acute and chronic form of the disorders of the digestive organs.‡

In the Medical Repository for March 1824, there are two cases related by Dr Chisholm of Canterbury, in which yellowness of the eyes and skin, and other symptoms that I consider to denote derangement of the digestive tube were prominent

* It is worthy of observation, however, that this sallowness is often owing to a peculiar condition of the cutaneous circulation, and is wholly independent of the state of the bile. In many Europeans who have been long resident in India, we witness a sallowness of this description; and it is a yellowish hue, arising from the same cause, which often imparts a distinctive character to the yellow fever of the West Indies. Dr Good represents the yellowness in this fever to arise from the absorption of bile, but it has nothing to do with such a cause.

† Treatise on Gout, page 85 (4th edition).

‡ Essay on the Mimoses, page 78, and 116.

features; during life, they were considered as examples of liver disease, and treated accordingly, but dissection proved the biliary organs to be perfectly healthy. These cases afford additional and unequivocal evidence of the truth of many of the opinions advanced in this essay, and as the first case is particularly interesting, I have transcribed it at length.

"Richard Sutton, ætatis 25, servant in husbandry, was admitted into the Canterbury Hospital, April 18th. This poor fellow was in a very debilitated state, and could not give any account of himself. From a person, however, who accompanied him, I learned that his symptoms were, 'sickness, inability to retain any thing on the stomach, very obstinate constipation,' and that he had some time before laboured under fever and inflammation.—Habeat quam primum hydrarg: subm: gr. x. Extr: hyoscyami gr. v. Inj. enema purgans. Pil. hydrarg: gr. v. P. Ipecac: comp. gr. x. horâ somni. On visiting him next morning, I had leisure to make a closer examination. *Skin of a yellowish green hue, as were the conjunctivæ* (as described by Dr Baillie, in green jaundice). Great prostration of strength, and flatness of the abdomen. Pulse scarcely perceptible at the wrist. No fulness of either hypochondrium. On applying pretty severe pressure to the right lobe of the liver, he appeared to wince. Urine natural in quantity, but rather highly coloured. *The calomel has procured several dark, offensive stools.* Sick-

ness only after eating. Retained the Dover's powder, which, with the blue pill, is to be continued every night. Cathartic mixture every morning, and the effervescing mixture occasionally.

"This plan was persevered in until the 25th, during which time I had several opportunities of shewing this case to my professional friends, who agreed with me in thinking (though the case was obscure), that *the seat of the disease was the liver.*

"25th. Omitt: Pulv: Ipecac: Co.—Cont Pil: Hydrarg: Illin. Semi-drachma Ung. Hydrarg. Fort. Sup. reg. Hypochon dextr. quâque nocte.

"The greatest attention was paid to the different symptoms. The bowels became more regular in their action, and the dejections more natural; the sickness, too, was less distressing. Nourishing food, with wine, was given; as well as bark, aromatic confection, &c. &c. The treatment, however, was of no avail: he died on the 20th of May.

"Dissection.—I examined the body 24 hours after death, when I found *the liver perfectly natural in size and structure; the gall bladder about one-third full of healthy bile;* the stomach smaller, and more *flabby* than common; no disease of the cardia or pylorus; pancreas, spleen, kidneys, and urinary bladder, natural. *The intestines had a contracted appearance, and their villous coat (as did that of the stomach) readily yielded to the application, though slight, of the finger-nail.* The lungs were studded with tubercles in different stages, and very firmly attached to the pleura cos-

talis, on both sides, requiring very great force to separate the adhesions. The pericardium contained about an ounce of fluid, and was here and there spotted with coagulable lymph on the internal membrane. I thought the heart was smaller and softer than natural, but could not discover any disease in the mitral, semi-lunar, or tricuspid valves; neither was there any communication between the ventricles; the foramen ovale was closed. On removing the scull-cap, I was astonished to find the vessels, even the most minute, gorged with blood. The ventricles contained more fluid than usual, and there was evidently a softening of the centrical and medullary substances."

This extract would have been perhaps still more useful, had the alimentary canal been more minutely examined, and the morbid appearances there more fully noted; however, as the description stands, it proves that the chief disease was in that canal, and it is most probable, that all the unhealthy phenomena, found in the head and chest, derived their origin from the intestinal affection. Dr Chisholm considers this "a very vexatious and unsatisfactory case;" but would it have appeared so, had liver disease been a less frequent subject of consideration with the physician, and the digestive tube obtained that attention, which its more delicate organization, and its more important offices demand?

This relation proves what I have already ob-

served (page 43), that so far as the colour and fetor of the stools are concerned, it matters little how healthy the bile is, if the digestive tube is severely disordered, or diseased; for we perceive in this instance, that the liver was sound, and its secretion apparently neither faulty nor deficient, for the gall-bladder was one-third full of healthy bile, yet the bowels were obstinately constipated, and the motions, produced by the aperients administered, dark and offensive. Precisely the same phenomena have been discovered in other similar cases of intestinal disease.

The second case, alluded to above, was one of hæmoptysis, which terminated fatally, and where the face, during life, "was generally of a cadaverous hue; and the conjunctivæ much tinged with bile." Dr Chisholm observes, "Having heard that this patient had been in the hospital (I believe more than once) before, and *that his complaint had been considered an affection of the liver, and treated as such, I proceeded to examine that viscus very minutely; its size and structure were natural*, but of a deeper colour than usual; the other abdominal viscera were likewise healthy." It is evident, therefore, that the yellowness of the eyes in this patient also, which the physician regarded as dependant upon hepatic mischief, was really owing to functional disorder of the digestive tube.

A sensation of fluttering at the pit of the stomach has also been enumerated by Dr Pemberton and others, among the signs characteristic of chro-

nic disease of the liver; but my experience convinces me, that it is rather a symptom of indigestion in the stomach or bowels; and I have known Brandish's alkaline solution remove it, after mercury and other means had been resorted to in vain. The same may be said of an intermitting pulse. It has been wisely remarked, that "a sense of *fluttering* about the heart, or at the scrobiculus cordis, is the *universal* symptom of disorders of the digestive organs, and of nervous affections; whilst it seldom or never occurs in organic diseases."* And that "in organic diseases, the pulse is generally frequent and small, but regular. In disorders of function, it is usually of the natural size and frequency, but often intermittent and irregular."† From the nature of the symptoms, we cannot be surprised if this fluttering and intermittent pulse (particularly the latter) should be the cause of much uneasiness to the subjects of them, and such they almost always are. Therefore, it is gratifying to be able to dissipate the fears arising from this source, by assuring the individuals thus afflicted, that there are few facts in medicine better established, than that these are symptoms of irritation and disorder, but not of disease. "Some books speak of intermitting pulses, as dangerous signs, but, I think, without reason; for such trivial causes will occasion them, that they are not worth

* Hall on Diagnosis, first part, page 105.

† Ibid (page 125).

regarding in any illness, unless joined with other bad signs of more moment."*

Judging from the frequency with which we hear of our neighbours being afflicted with "*liver complaints*," it would seem that this disease is more common than even consumption. It is accurately calculated, that this affection of the lungs carries off prematurely one-fourth of the inhabitants of Europe, and that above five thousand persons die of it annually, in London alone! Yet, I appeal to any unprejudiced person of respectability, who has an extensive acquaintance, and especially to those whose custom it has been to mix at Bath, Cheltenham, Brighton, &c. among the valetudinary and convalescent visitors to those favorite resorts, whether, so far as report goes, disease does not appear at least as frequent in the liver, as in the lungs? Notwithstanding, if the bills of mortality be examined, it will be found that hundreds of deaths from consumption are recorded every quarter, whilst there is hardly a trace to be found in them of those who have died from diseased liver. It is acknowledged, that disease of the liver is in general by no means so certainly, or rapidly fatal as that of the lungs, and that it not unfrequently originates other complaints, which prove fatal (as dropsy), from which cause the hepatic disease is not recognized as the original source of all the subsequent mischief; but if it were half so common

* Heberden's Commentaries, page 510.

as is conjectured, there is no doubt we should find at least fifty cases of death from this disease noted in the quarterly returns of the bills of mortality, where there is now in fact no more than one.

Formerly, disorganization of the liver was rarely found but in middle-aged and elderly persons; now, it seems to be considered almost as common in the young as in the old, and is not unfrequently recognized even in children. I am acquainted with a physician who has gained great credit with a family of some distinction, by curing one of the little children of a "*liver complaint.*" Yet Dr Baillie remarks, in his work on Morbid Anatomy, that this disease is hardly ever met with in a very young person; an opinion that does not admit of just contradiction. Notwithstanding, I have known several young persons who were pronounced to have this fashionable disease, and who rapidly emaciated and grew worse under an active course of mercury, some of them dying in a state of salivation! Who can say that these were cases that would not have done well, if a rational and suitable mode of treatment had been instituted?

It were well, if the idea of the universality of bilious and liver disease had been the only error in this point, introduced among us from abroad. Were this the case, it would have hardly been worth the trouble of refutation; but a practical evil has resulted from this error in language, and the active mercurial oxides are improperly represented to be the sure and only remedies for the

major part of the prevailing disorders of the digestive organs. Thus, the constitutions of the inhabitants of this island have been, within the last twenty years, mercuralized without mercy, and, consequently, scrophula, consumption, palsy* and indigestion, all diseases of debility, have rapidly and greatly multiplied; and as long as this mineral is so freely and indiscriminately administered, they will continue to increase both in number and obstinacy. Not only are "*bilious and liver complaints*" much less frequent than many suppose, but when disease has really invaded the structure of the biliary organ, it is very questionable whether an active use of any mercurial preparation is the best treatment that can be adopted. This point we shall consider presently.

* That scrophula and consumption have much increased in frequency in Great Britain, within the last thirty years, is generally admitted; that it is the case with stomach complaints is notorious. The following authentic record of the number of deaths from apoplexy and palsy, that occurred in London in the four last years of the seventeenth and eighteenth centuries, shows how alarmingly these diseases also are increasing upon us.

Years.	*Died of Apoplexy and suddenly.*	*Died of Palsy.*	*Total Mortality.*
1696	109	17	18,638
1697	111	27	20,970
1698	116	21	20,183
1699	106	24	20,795
1796	225	73	19,288
1797	214	99	17,014
1798	224	86	18,155
1799	249	105	18,134

See Willan's Reports, edited by A. Smith.

CHAPTER II.

OF THE DIFFERENT KINDS OF INDIGESTION.

INDIGESTION, like most other complaints, differs in its seat and character in different patients. There are four different kinds of disorders of the digestive organs, each having its seat principally, if not exclusively, in a particular organ, though one species or variety seldom exists, for any length of time, without producing an unfavourable change in the neighbouring parts, and therefore, in some degree, occasioning the other varieties. Among these multiplied affections, we accordingly meet with some whose immediate seat is in the stomach; others, in which the small intestines are chiefly or almost entirely concerned; a third description, where a faulty or deficient biliary secretion is the principal, if not the sole complaint; and a fourth, in which the large intestines are most affected, the derangement existing there being sometimes the single cause of much local and general disturbance and distress. All these being cases of disorder situated in some part of the assimilating apparatus, may with propriety be classed under the head of

Indigestion, or *Dyspepsia*, because their immediate tendency is to prevent the regular and perfect digestion and assimilation of the food.

In the severer forms of this malady, it is manifestly of no small moment to the patient, or assistance to the medical attendant, that the kind of affection present be correctly distinguished, since on this foundation alone can the former reasonably hope to derive from professional exertion, that efficient and gratifying relief which it is, in general, so well calculated to afford; and as it respects the physician, it is equally evident that this knowledge is not only of consequence to him, but also that it must, if his efforts are usually successful, be the very first which he must obtain. I shall therefore endeavour briefly to point out here, the discriminating symptoms of the varieties of indigestion now referred to, so far as my leisure and experience enable me.

1. In the first modification, furred tongue, clammy mouth, want of appetite, heart-burn, oppression at the pit of the stomach after meals, or sinking after a short abstinence, with nausea and rejection of food, are generally the most prominent symptoms. The mouth is parched and dry in the morning, thirst prevails through the day, and the breath is more or less fetid. The bowels are often tolerably regular, sometimes quite so, and the colour of the motions little changed from a natural appearance. In some cases, there is a tendency to constipation, although the colour of the fæces

remains the same as they were when the patient was quite well. The drinking of much liquid is particularly distressing. There is tenderness on pressure, and pain at the pit of the stomach, and sometimes towards the left side. A puffy swelling also is occasionally to be felt at the former part, and, in protracted and severe cases, soreness may exist there, and a burning sensation, more or less constant, and extending to the right side. Morbid acidity in the stomach is very common, and likewise a simple returning of the food soon after it is taken, especially of the dinner meal. The urine, in general, soon becomes turbid, and deposits, on standing, a yellowish, or yellowish red sediment. It is not seldom small in quantity. The complexion sometimes becomes pale, but is very rarely sallow.

2. When the small intestines (parts of great extent and importance) are the organs most affected, the tongue is usually furred, although not so greatly as in the first variety, and perhaps the fur has not so white an appearance. Here the thirst is less than in the former modification; the mouth not so parched or dry; the appetite not so sensibly impaired, nor the breath so much tainted. There is little oppression, or sense of sinking at the pit of the stomach, except after an immoderate or improper gratification of the palate, nor is there any nausea or vomiting; but the bowels are variously and much disordered, being either very confined or too much relaxed. The stools are highly

unnatural and offensive, being either of a light brown colour, or green, or dark and black, pitchy, and frequently slimy. Occasional or frequent diarrhœa is often a troublesome symptom of this form of the complaint, and sometimes exists from the commencement. As thirst is not urgent, fluids are not indulged in, and when they are, they do not oppress and injure the individual so greatly as when the stomach is principally affected. In the first modification, there may be considerable extrication of gas from the stomach; in this, the patient is annoyed with offensive flatulence in the bowels. When pain is present, it is felt in the bowels, most commonly in the right side, and about the umbilicus; and as, where the stomach is the part most affected, we have heat and viscid secretion in the mouth, so when the disorder exists chiefly in the bowels, the heat and irritation is most sensible and troublesome at the other extremity of the digestive tube, and the patient is often afflicted with piles, and sometimes with tenesmus, after a visit to the water closet. In general, I think the colour of the urine is high, and it deposits a highly coloured red sediment. The complexion is pale and sallow, sometimes yellow, which last colour often tinges the conjunctivæ also.

3. Should the biliary organs be chiefly involved in the existing disorder, the prominent symptoms are in general pain or uneasiness in the right side, constipation of the bowels, unhealthy alvine discharges, in which the white and dark perhaps pre-

dominate, a yellow thick fur on the tongue, and a high pink coloured turbid urine. The appetite is usually more impaired than in the second form, but not so much so as in the first. The pulse varies, in a small degree only, from the healthy standard. In this, as well as in the second modification, digestion appears to take place with tolerable facility and perfection in the stomach; but indigestion occurs below this organ, yet not, I think, to so great and uncomfortable a degree as when the bowels are more under the influence of disorder than the liver. Upon the whole, it may be questioned whether the sallowness and jaundiced hue of the countenance and eyes are more frequent and visible here, than they are in the second form; but they are, in some cases, of a more steady character. In cases of some standing, there is generally a palpable enlargement and hardness in the right side, close to the margin of the ribs.

4. The true seat of indigestion originating in disorder of the large intestines, often remains a long time undiscovered, the reason of which appears, to me to be the frequency with which the generality of dyspeptics labour under some irritation about the rectum or anus, such as piles, occasional discharge of blood, heat and pain there on going to stool, &c. When patients complain of these symptoms, professional men usually think they are only indications of the existence of disorder in the superior portions of the canal, which do incidentally happen to almost all such patients, and which are

only to be removed by the remedies calculated to remove the chief and original affection. As a general opinion, this is no doubt a correct one, but cases of dyspepsia not unfrequently occur in which the chief seat of all the patient's distressing symptoms is in the rectum and colon. These cases may very generally be distinguished by the presence of pretty constant uneasiness about the anus on going to stool, with frequent discharges of blood; occasional pain in the rectum; obstinate costiveness, which nothing but medicine is capable, for any length of time, of obviating; and uncommon flatulence. On close examination, it will commonly be found that the diameter of the fæces, when consistent, is less than usual, and flattened or figured; and sometimes there is a slight prolapsus of the skin of the anus on one side. Occasionally the patient labouring under this form of the complaint, will be daily much annoyed by frequent calls to the water closet, which are only partially effectual. The most frequent cause of this modification of dyspepsia, is the existence of a permanent contraction, or stricture in the rectum, or lower part of the colon; but I believe an excessive irritability of those parts, unattended with any permanent contraction, does now and then exist, and form the real seat of all the distress which is suffered under the general appearance of indigestion.

In this last modification of the disorder now treated of, I have uniformly observed that the patients are greatly distressed with bilious headaches,

if the bowels are permitted to remain in a confined state beyond a certain period. But, if the patient is tolerably attentive to his diet, his appetite is uniformly good, and the tongue but little furred; the strength however, is often much impaired, and in the advanced periods of the malady, the nervous depression and irritability are at certain times excessive and peculiarly harassing.

Amongst the multitude of the complaints under view, which we are every year called upon to witness and to treat, there will ever be many, in which some of the above symptoms will be found, that are noticed as denoting a different form of the complaint, while others may be absent that properly belong to them; yet, according to my observation, it but seldom occurs, that the characteristic signs do not exist in such number, and with sufficient evidence, to enable us, upon proper consideration, to discover the particular kind of derangement which we are requested to prescribe for. In stomach disorder, the want of appetite, the oppression after eating, and the occasional pain in the epigastric region and left side, the very furred white tongue, the frequent rejection of food, and the distress occasioned by drinking freely of liquids, will usually point to the seat of disorder pretty distinctly. In intestinal irritation, the highly disordered state of the bowels, the unnatural appearance and offensiveness of the motions, the intestinal pain and flatulence, the partial wasting and debility, while the appetite is good and the tongue but little furred, clearly

show, that the bowels are subject to the most sensible and greatest disorder. The affection of the liver is denoted by the greater degree of pain in the right side, up under the ribs, of tenderness on pressure there, which is sometimes attended with enlargement and hardness, by the pulse being almost unaffected, the urine pink-coloured, and sometimes by the whiteness and tenacity of the motions. In this last form of the disorder, from the insensibility of the organ concerned, the symptoms are often obscure, and seldom point with great exactness to the nature of the malady. The disorder of the large intestines may always be ascertained by passing a bougie.

I have observed that in cases of indigestion depending on great irritation in the large intestines, patients have often an unimpaired appetite and relish for food, with a clean tongue, and they will also digest their food well, provided they are careful in respect to the two points of quantity and quality; and this state of the stomach and tongue will often be present, when they are greatly harassed by general nervous depression, and local uneasiness about the rectum.

There is seldom much difference in the pulse of the various classes of dyspepsia. It is mostly small, weak, slower than natural, but regular. Under an aggravation of the symptoms it may become quicker than natural, and sometimes intermitting. If there exists an inflammatory action or tendency, it is more or less hard.

The second form of abdominal derangements above noticed, appears to me to be the most common, and it is also, in general, the most painful and obstinate,—that which is more extensive in its effects than any other, and which gives rise to more dangerous and intractable diseases. Next to it are the disorders of the stomach; then those of the liver; and lastly, those of the large intestines. The disorders of the biliary organs, notwithstanding what is generally asserted to the contrary, I am constrained, after considerable reflection upon the subject, and an impartial and strict examination of it, to consider as very inferior to the varieties preceding it in the foregoing division, in frequency, intensity, and importance.

In the bowels we recognise the seat of those internal disorders of the abdomen, which so generally prevail in autumn, and at other seasons of the year, and which are, for the most part, readily cured by aperients and alteratives. Here especially originate gout, scrophula, tic douloureux, and other frequent and painful chronic maladies, which we have to combat, at every stage of professional exertion; and it is likewise here that those more alarming and fatal complaints—acute diarrhœa, dysentery, cholera morbus, hydrencephalus, and perhaps fever, have their chief and primary seat and origin. The organization and offices of the intestines, clearly explain the reason why they are so pre-eminently susceptible of irritation and disease, and serve at the same time to corroborate the fact.

Their internal surface is of immense extent, and exquisite sensibility; it is an absorbing and secreting surface of the first importance in the animal economy; since the chymous pulp prepared in the stomach from the food, is here converted into chyle, absorbed, and carried into the circulating system, to nourish, sustain, and invigorate the whole, while the gross, innutritious parts are carried downwards for the purpose of being expelled. Here are retained, for a longer or shorter time, the bland and nourishing, as well as all the harsh and irritating liquids and solids which we take in the form of food, or medicine, or as a gratification to the palate. They are applied immediately to its surface, and considering how unremittingly this is done, both in excess of quantity, and without regard to quality; how numerous are its blood-vessels and nerves, and therefore how highly sensitive it is, and how extensive its connexions; we may be surprised that disorder of the stomach and intestinal canal is not more frequent and inveterate, rather than it is so general. Besides, there is no other organ which is so much affected by the never ceasing changes and vicissitudes in the atmosphere, to which we are constantly exposed, and from which we so greatly suffer in this climate; neither is there any one (except the stomach), that so immediately and intensely participates in mental affections, or irregular morbid action of any part of the nervous system.

Hitherto we have considered only the varieties of indigestion arising from the difference of their

situation, but there is likewise a manifest difference in dyspeptic cases founded on the general condition of the constitution, without any reference whatever to the particular seat of affection, and which distinction it is at least of as great consequence to understand, as the varieties already noticed.

We meet then, in practice, with two different states of the general system in this disease; one is a condition of simple debility, the other is a state of debility associated with inflammatory action, or a strong tendency thereto. The latter case is denoted by a uniformly dry state of the skin, with more or less local pain, a tendency to inflammatory congestion in the head, side, lungs, or other parts, being frequently present, with a hardness in the pulse. There exists also much feverish heat, which stimulant remedies are very apt to augment greatly. In the former case, the skin it is true is sometimes dry, but it is also often moist, and that for days or weeks together; and there may likewise be local pain, but it is manifestly rather the pain of weakness and disorder than that of inflammation, and the same may be said of any appearance of congestion in the head, &c. The pulse here is small and feeble, without any tension; and the feverish heat or flushes, which almost all dyspeptics are occasionally more or less subject to, is such as is generally relieved by mild tonics and stimulants.

Many cases of indigestion with inflammatory appearances occur, which require the exercise of

much caution and discrimination, in order to ascertain whether these appearances are owing to debility, or to inflammation, and many grievous errors have been committed in this respect from want of attention.* Yet I think a physician of observation can rarely fail to discover the real nature of the case before him, if he duly considers the condition of the pulse and skin, with the constitutional tendency of the patient, and does not overlook the fact that debility alone, when considerable, will often produce in persons not disposed to inflammation, such an irregular and apparently excited state of the local circulation, as simulates true inflammatory action. This subject will be further illustrated in the fourth chapter.

The inflammatory action above adverted to is, of course, not that of acute inflammation, but of an inflammation of a subdued and imperfect character, which is usually termed chronic.

* Some years since, a surgeon at a fashionable watering place attended a patient, above fifty years of age, well known to the author, who laboured under considerable weakness and much stomachic disorder, and had always been weakly. The surgeon alluded to was called in to attend her for a great increase of internal disorder, accompanied with pain and uneasiness about the forehead and eyes; the latter symptoms led him to bleed her from the arm, and an increase of pain being the consequence, he bled her again: the result was lamentable indeed, for it produced so much exhaustion that the next day she suddenly lost her sight, which has never returned. This was a case in which tonic remedies were indicated, and would probably have done the patient much service, whereas the debilitating measures so improperly resorted to, inflicted an injury from which it is very unlikely she will ever recover.

CHAPTER III.

OF THE CAUSES OF INDIGESTION.

Almost every observant person is now struck with the frequency of Indigestion among the inhabitants of Great Britain, and it is a common and interesting question, what is the cause of the uncommon frequency of this complaint among us? It is seldom that I have met with a correct answer to this enquiry, either in conversation with professional men, or in their writings; some attribute it to one thing and others to another, but most certainly the cause is not *one*, it is not *single*, but is for the most part dependent on changes which have of late years gradually taken place in the general pursuits and mode of living in this country, and since these changes are undisputed, and are, I think, equal to the production of the effect, the real sources of the malady appear to me sufficiently manifest.

It is a general sentiment that a grand cause, if not the chief one, is inordinate repletion, and its necessary concomitants morbid distention of the stomach, &c.;* but many circumstances concur to

* Some authors on Indigestion appear to lay great stress on

prove the fallacy of this opinion. It is fully ascertained that the old English ate and drank as much (some think more, and I am of that opinion) as we do in the present day, yet they were comparatively exempt from indigestion. In the reign of Henry the eighth, for example, both wine and ale were commonly drank at breakfast, the quantity served being a pint to each person; and maids of honour in the court of Queen Elizabeth ate beef steaks for breakfast, and drank ale after it; while at present we can hardly take a small quantity of ale after dinner, without its occasioning much inconvenience. Again, it is well known, that in the majority of cases, if a dyspeptic will give ease to his mind, and free exercise in the open country to his body, he digests his food easily and perfectly, which before sat very uneasy on the stomach, and

morbid distention from over-feeding, as a cause of indigestion, and also on eating too fast as a source of morbid distention; but is not this mere trifling, when causes of greater frequency and weight are at the same time overlooked? Did not our fore-fathers distend their stomachs as much as we do, or more, and did they not eat as fast? Yet where was their indigestion? This view of the subject, although countenanced by some whose writings on this complaint are valuable, is very unsatisfactory and erroneous. A knowledge of the causes of a disease is of great consequence towards a correct employment of the most efficient means of recovery; and this view has a direct tendency to lead patients to lay the *greatest stress*, on what is in reality of *inferior importance*. It cannot be my wish to undervalue the effects of attention to diet, but, as I have had occasion to remark elsewhere (*Treatise on the Art of Prolonging Life*), in all sciences we must learn to distinguish the relative value of different agents, if we would apply them with the *best effects*.

often excited perhaps what are termed fits of dyspepsia. It cannot be correctly said, that in these instances the diet is the cause of indigestion. It is true it proves the incidental occasion of uncomfortable sensations and disorder, because there previously existed a weakened and depraved condition of the assimilating organs, from the influence of moral or physical causes (or both) of a character very different from excessive repletion; the stomach here being rebellious and fastidious, simply from its debility, and not because the food is of inferior quality, or in improper quantity.

I consider the principal causes of indigestion to be 1st. A sedentary mode of living, that is, one in which bodily exercise is deficient; 2dly. Anxiety of mind; 3dly. The inhabiting populous cities or places. Among the chief minor causes we may probably reckon, light dressing; late hours; and an unrestricted indulgence of the appetite. In the latter we may include the influence of improper quality, as well as undue quantity of food.

After much consideration of this subject, I am fully persuaded that deficient exercise and mental anxiety are by far the most common and most powerful sources of dyspepsia, and when considered in conjunction with the common practice of crowding into towns and cities, to the neglect of those rural pursuits, which necessarily carry men abroad continually into the open country, they will be found quite equal to the production of that remarkable and general change in the vigour and

energies of the digestive apparatus, which is now so conspicuous among us, and which is the immediate cause of indigestion, that is, in what the disorder essentially consists. It does not consist with my present plan to enter at length into this subject, and it must suffice for me to remark that it is very evident, that individual wealth has accumulated in this kingdom within the last thirty or forty years beyond all precedent, the acquisition of which has been attended (as the history of the world proves it ever has been, and ever will be) with unusual anxiety, and diminished bodily exercise of a salutary kind. It is plain that in the present state of things, men's minds are too much engaged, and their bodies too little, and here lies the root of the bodily mischief so much complained of. It must not be forgotten, that independently of the anxiety attending an eager pursuit of business, the uniform result of success is a greater style of living, which invariably brings with it an increase of care, and multiplies the sources not of enjoyment, but of disquietude.* So far as deficient exercise is concern-

* The influence of success in our worldly pursuits here alluded to, when become frequent, is much greater than perhaps the generality of men are wont to think it. It works extensively in various ways, and produces marvellous changes on the moral and physical condition of a people. With this success, the "pride of life" increases; every man is struggling to compete in style with his neighbour, and in the struggle, whether successful or not, he necessarily exposes himself to numberless anxieties and disquietudes, which do not cease even with the consummation of his wishes, but are too often thereby much augmented.

ed as a cause in the present case, I have already given it as my opinion (in the book just quoted), that it is "the debauchery of inaction," and not of repletion, that has spread itself so extensively throughout this nation, and engendered so alarming an increase of dyspepsia, and other chronic maladies.

Among the minor causes, no doubt excess in eating and drinking has great effect in multiplying cases of indigestion; which effect is augmented by the inferior and base quality of many articles of diet of general consumption, such as baker's bread and brewer's beer. It is not many years since it was as common for families to make their own bread, and brew their own beer, as it is now for them to have these articles from their tradesmen. My readers will perceive that I do not wish to represent these changes as principal causes of the present malady, but they are causes, and probably have greater effect than is commonly supposed. It must be recollected that these are articles of *daily* consumption, and therefore, if injurious, their deleterious operation, although in the beginning silent, yet is sure, and annually accumulating.

If what is now said be true, it follows that the cause of indigestion is not single, but that its origin must in general be sought for in many injurious habits; deficient bodily exercise, and mental

anxiety, being those causes which have by far the most powerful influence in its production.*

* The circumstance of the Parisians and inhabitants of French towns generally, being less subject to the various forms of dyspepsia (the very name of which is unknown to them), than those of the large towns of England and America, furnishes a curious subject for enquiry. Are the French more exempt from any or all the causes enumerated by our author than the English and ourselves? Let us view some of these separately. To the first, namely, a sedentary life and deficiency of bodily exercise, the inhabitants of the Gallic towns perhaps plead as guilty as the others we have mentioned, if we except their well known saltatory propensities, which however are not generally indulged by *les gens des lettres* of different orders. In regard however to the second cause, namely, mental anxiety, we certainly think ourselves justified in speaking with less hesitation, and disposed to join all the world against the declaration of the facetious Yorick, that if the French have a fault "they are too *serious*." The happy moral constitution with which they are endowed by nature enables them to rid themselves almost at pleasure of those cares and inquietudes that sink deep into others and poison the fountains of their health and happiness. Their capacities for social intercourse and keen relish for amusement, let this come in whatsoever form or shape it may, unquestionably tend in a high degree to diminish one of the most abundant sources of dyspepsia. In the French character we observe far less of what our author calls by a borrowed expression, the "pride of life," than is apparent in the English and, unfortunately, but too strongly manifested among ourselves. They seem too much disposed for the immediate enjoyment of their worldly goods, to hoard them up with ceaseless anxiety in the sordid hope of becoming one day richer than their neighbours, and able to outvie them in style.

A view of the considerations, embraced in our author's third division of causes, would require much more space than is allotted to a marginal note. One of the topics involved, namely, the peculiarities of French diet, and notions relating to eating and drinking, would alone furnish matter for a formidable volume, and possibly for two or three. We shall therefore dismiss it with the remark, that we regard the free use made of animal food in this country, together with the despatch and little discrimination ge-

CHAPTER IV.

OF THE TREATMENT OF INDIGESTION.

In adverting to the treatment of this disorder, I think it desirable to notice first, the general principles of that treatment, and afterwards, the employment of individual remedies.

It is proper to notice the general principles of management first, because they obviously, supposing them correct, form the foundation on which alone any physician can practice successfully. To these principles, when his practice is considerable, he finds himself compelled continually to refer, and in obstinate or obscure cases, they frequently prove as a light to guide him in the darkness that may surround the malady of his patient, and thus preserve him from being led astray by incidental symptoms or circumstances of an untoward char-

nerally manifested in eating, as contributing greatly to multiply dyspeptic ailments. This remark we think applies with peculiar force to the very young and aged, or such as have passed the middle of life. No fact can be more self-evident than that feeble powers of digestion require particular attention both to the quality and quantity of the food.—*Edit.*

acter, and likewise from the mazes of error into which many fall who have either no principles at all, or only those which are erroneous.

There are two general principles, which are of paramount importance and universal application. They are, 1st. That the secretions generally are to be restored to as healthy a state as possible; 2d. That while we are aiming at this, the strength of the patient must be maintained and augmented also to the utmost. A third general indication I shall notice presently.

It has certainly been too much the practice in this complaint, as well as in other chronic maladies, to overlook or disregard the latter principle, while aiming to accomplish the object described in the former, from which circumstance many patients have necessarily suffered greatly for a time, and some permanently, as the mischief done by active lowering measures, could never after be perfectly surmounted. At this we cannot be reasonably surprised, because if the physical strength of an individual is reduced below a certain point, it is often found impossible entirely to recover the injury thus inflicted, at least by the use of any means within the individual's reach. I think it is frequently not sufficiently considered, that this disorder has, for the most part, its origin in debility, and also that local or general weakness is a common cause, indeed the chief cause of unhealthy and depraved secretions. It follows from this, that when lowering measures are

used, or permitted to operate, although the most efficient alterative medicines may at the same time be given, the secretions remain unimproved, and the patient instead of getting better, grows worse, and for this obvious reason, that we are, by having recourse to enervating means, strengthening the foundation of depraved secretions, which is debility, and thereby rendering the most efficacious alteratives of no service whatever. This applies equally to a lowering treatment employed only for a few days or hours, and to that pursued for weeks; and these circumstances lead me to believe that the very general practice among Surgeons, of giving a patient a calomel or blue pill at night, and a brisk purging draught in the morning, defeats its own object of restoring more healthy secretions by the weakness which it occasions. In this case, if the pill be given, in combination with antimony, and without the purgative, it will seldom fail ultimately to accomplish the object desired, which I believe is frequently unattained when purgation is connected with it.

In indigestion, and all chronic maladies, it may be safely laid down as a maxim, that the secretions will often be restored to a healthy character by tonic remedies, simply used as such, while they can never be perfectly and permanently improved by the most efficient alteratives, whether simple or combined, which have an enervating effect, that is, which are so administered as to have this result. In reference to the treatment of the complaints alluded to, there is no general principle of greater

importance than this, and it has its foundation in the cause of morbid secretions, which are uniformly either so entirely dependent on debility, or so closely associated with it, as was above remarked, that to augment this weakness, is necessarily to aggravate the unhealthy state of the secreting surfaces. That debility is the fruitful source of depraved secretions* may be inferred from various characteristic circumstances, indeed, from the ordinary symptoms and progress of all chronic diseases. Whenever we meet with a weakly man, who perhaps may nevertheless not complain of any positive indisposition, do we not always find the secretions much deranged, and often in an exact proportion to his debility, the condition of the former ever varying with that of the latter, so that if the strength be increased, the secreting surfaces are immediately and evidently improved, while they are as directly injured by the reduction of the general strength? If it be inquired what is the kind of habit in which we witness severe and protracted ulcerations, or pimples, or swellings, or inordinate discharges, and other evidences of a morbid action of the secretory vessels, is not the ready answer,—in that which is either originally weak, or which has become so from the influence of bad habits, or deleterious agents? Again, in susceptible consti-

* Under the term secretions, I include all the excretions as well as those discharges which are by physiologists more strictly termed secretions.

tutions, where we fear the possible occurrence of tubercles or ulceration in the lungs, or of enlargement and ulceration of the joints or glands, &c. (such as is so frequently seen in strumous habits, or those disposed to scrophula), is not the *correct* advice of the physician invariably to this effect—if you can maintain the patient's general strength, you place her in a state of security, but mark well, whatever tends to lower the general vigour of the frame will threaten her very existence. The ordinary operation of the most useful remedies concurs to prove the correctness of the assertion now advanced, for how frequently does it happen that the physician seeks in vain, even by the most powerful alterative medicines judiciously prescribed, to correct the unhealthy condition of the vessels just referred to, if he neglects to recommend, at the same time, means which have what may be termed a direct tonic effect. Thus it is that quinine, iron, and other tonics, given in conjunction with calomel or blue pill, often accomplish such objects as are now spoken of, which the latter could not do alone, even under favourable circumstances in other points of view.*

* For the same reason the professional man appears to me often to defeat his own intentions, when he advises in chronic disorders the use of mercurial alteratives, for example, but likewise recommends at the same time local, or general blood-letting. In this way, he is frequently employing, in the same day, antagonist forces, and may be seen really, though unwittingly, creating greater disturbance than he was called to cure.

These facts show the utter folly of a sentiment common among a certain class of persons, that in severe chronic diseases, the constitution must in the beginning *suffer* under the operation of active remedies, in order to the cure of the existing malady. This is a sentiment which has been the source of innumerable evils, and whether expressed in words, or only by the practice of those who embrace it, ought never to meet with any quarter. It points to a way the very reverse of that dictated by Nature, and therefore the reverse of what is right, for the moment she commences the cure of any disease, in the same moment does she begin to restore a comfortable feeling to the afflicted, which, in the main, increases and keeps pace with his gradual recovery.

A third grand indication in the general management of disorders of the digestive functions, is the relief of irritation. Keeping this principle in view, may assist us very much in the correct application of the other principles just noticed, for if the measures taken to restore healthy secretions, or augment the strength, are productive of irritating or uncomfortable sensations, we may almost always conclude that those means are either inappropriate in themselves, or employed in an unsuitable manner. The results of attention to it likewise tends greatly to strengthen the evidence in favor of the sentiments here advanced, respecting the necessity of increasing the general energies of the body as far as possible, for we invariably find that irritability,

pain, and irritation are closely connected with debility, so much so, that whatever augments the latter aggravates the former, and, on the contrary, we cannot take a more certain way of lessening the former, than by resorting to those means which have the greatest influence in removing the latter.*

Acting on this principle of relieving irritation to the utmost is also very frequently of eminent service in directing us to such measures, as prove of great value in aggravated cases, which, at least in the beginning, do not admit of remedies tending directly either to improve the secretions, or increase the strength. It must be remembered that I now advert to protracted or extreme cases, in which we so commonly find excessive uneasiness and irritation, under various forms; and in which we are unable, with propriety, to do more than endeavour to soothe the malady of the sick, until a favourable change takes place, and permits us to advise measures capable of exercising a beneficial influence of a positive character. Here we have it always in our power to recommend the use of mild soothing means, calculated to relieve irritation, and

* Indeed, we may take an extended view of the subject, and justly affirm that, as Mr Abernethy expresses it, *the relief of irritation is the great object of medicine.* For in proportion as we succeed in delivering our patient from all that is debilitating and annoying, so do we enable the constitution, or Nature, as some would say, to perfect the work of restoration. This sentiment is equally applicable to acute and chronic diseases.

thus to pave the way for the more speedy and more effectual application of remedies designed to fulfil the preceding indications, and thereby permanently to restore the patient's health.

We have now to speak of the application of individual remedies to the fulfilment of the general principles or indications above proposed, and this will terminate what I have to say respecting the treatment of the present disorder, for in proportion as we succeed in allaying irritation, and in establishing the physical energies of our patient, and improving his secretions, so do we succeed in restoring him to health.

The remedies for indigestion naturally divide themselves into three great classes, viz:—Medicine, Diet and Regimen. Under the head of Regimen, I include air, exercise, bathing, and the like.

The medicines which I have found to possess the greatest efficacy in fulfilling the objects just noticed, as being those which we should ever chiefly keep in view in the treatment of the present complaint, are mercurial preparations, rhubarb, ipecacuan, nitric acid, the alkaline solution, and certain metallic oxides, with quinine, sarsaparilla, and mild aperient medicine.

In the treatment both of the slighter and more severe disorders of the digestive organs, at this time so prevalent in every part of Great Britain, mercury, in general practice, holds the first place, and certainly its administration is very often attended with admirable effects, and sometimes such

as cannot be obtained by any other known remedy. But though frequently an eligible medicine, it is not always the best, even in small quantities; and has certainly been injurious in the common way of administering it, which I consider injudicious in regard to the mode, and deleterious in point of dose and repetition.

Calomel is, on the whole, the favorite form of this mineral, but as it has a strong tendency, when given alone, to weaken and irritate the stomach and bowels, it ought always in chronic diseases to be conjoined with other alteratives, which are of milder operation, and capable of aiding its salutary effects. Therefore, the frequent practice of ordering a grain or two of calomel alone in a pill at night, with an aperient in the morning, cannot be too severely reprobated. The proper practice is to combine it with tartarized antimony or James's powder, and guiacum, with or without a minute dose of opium, as circumstances indicate.*

In many cases, the milder preparations of quick-

* The following formula for alterative pills may be convenient to some, disposed to try the practice here recommended.

Take of calomel, twenty grains; tartar emetic, four grains; pulverized gum guiacum, two scruples. Rub these intimately together in a mortar, and with the addition of a sufficient quantity of conserve of roses, or syrup of any kind, form into a mass and divide into twenty pills.

The above prescription may be advantageously varied on some occasions by leaving out the tartar emetic and substituting twenty grains of James's powder. It is also sometimes useful to combine with the mass a small portion, say two or three grains of opium or its extract.—*Edit.*

silver, as the blue pill, or *hydrargyrus cum creta*, being less irritating than calomel, are found to agree much better, and to be very useful when the latter fails of any beneficial effect. This appears to take place chiefly when great debility is present, or the system is unusually irritable. I believe, however, that in numerous severe examples, the combination of calomel and antimony above referred to, excites a greater curative power than the blue pill, or any other mercurial compound.

Since all mercurial preparations are very active, the subjects of dose and repetition are worthy of great regard, and this applies more especially to calomel, because it is the most energetic of those preparations in ordinary use, and also from the doses in which it is too commonly given, being, in my opinion, improperly large, and more likely to produce and increase disorder than to remove it.

Some cautious practitioners look upon any quantity of calomel above four grains to be large; but I think the same of half that dose. Three, four, five grains, and even more, once or twice a day, for days or weeks, are doses now frequently ordered,* when half a grain at bed time, or a grain three or four times a week, where this article agrees, will effectually promote healthy secretions in some very bad states of the assimilating viscera. Then,

* Since the publication of the former edition of this book, I have had reason to hope that this medicine is not now given so incautiously as formerly; the above remarks, however, appear to me still quite appropriate.

surely, fifteen or twenty times that quantity of a substance which operates as a powerful stimulant to all the digestive organs, and to every part of the body, cannot fail to be extremely injurious. Formerly, a grain or two of calomel taken occasionally was considered sufficient to accomplish the ends for which, quantities, so excessive, are now recommended for a long continuance. This unhappy increase has arisen from a common and natural error, that of expecting an increased advantage from an augmented dose; it being either overlooked, or disregarded, that all medicinal substances are, for the most part, only relative agents in the cure of disease, and that it is the dose which almost invariably determines their specific effect; so that, though half a grain, or a grain of calomel, carefully repeated, is often powerfully curative, three, four, and more grains, administered at the same or shorter intervals, may be, and actually is, under ordinary circumstances, truly poisonous.*

Perhaps it will be urged, that though a grain, or

* It appears to us that the effects of no two medicines, having the least resemblance to each other, can differ more than those of calomel when given in large and in small doses. In a large dose, its operation is for the most part limited to the alimentary canal, where it acts as a prompt evacuant; but when administered in minute and often repeated doses, its chief impression is made upon other tissues than those with which it comes first in contact, and a general irritation is roused throughout the system, which frequently proceeds to inflammation in the fibrous, cutaneous and glandular structures. Such a distinction we think of the highest importance in a practical view.—*Edit.*

half a grain of calomel, administered three or four times a week, will correct some bad disorders of the abdominal viscera, it requires much more active doses, or at least that the grain should be frequently repeated, and longer continued, to remove a true liver complaint, that is, positive disease there. But this assertion is contrary to daily experience, and opposed to the opinions of some of the most esteemed practitioners of the present day. I have seen the constitutions of such persons irrecoverably ruined by active mercurial courses; but, in no instance, did I ever witness a cure effected by this treatment. It is painful to recollect, that in disorganized livers, mercury carried to the extent of salivation is commonly regarded as the sheet anchor, the fit and only remedy; for I will venture to affirm, that the far greater number of such cases grow materially worse, rather than better, from such use of it; and that this aggravation consists not merely in an increase of the patient's weakness and morbid irritability; but that the existing disease in the liver becomes more extensive and inveterate. Among others, Mr Abernethy, Dr Blackall, Dr Farre and Dr James Hamilton, Jun., bear a strong and weighty testimony against salivation under such circumstances, which it is highly desirable should be universally attended to.*

* If the opinions here set forth with so much force be correct, and that they are so we have not the least doubt, what incalculable mischief must result from a practice, founded upon the common notion of the absolute necessity of a mercurial salivation for

The first of these able writers observes, "*Persons who are salivated have, as far as I have remarked, the functions of the liver and digestive organs constantly disturbed by that process. I cannot, therefore, but think that it is wrong to use mercury in hepatic affections to that extent which would disorder the functions of the liver, if they were previously healthy.* In the majority of cases, the disorder has existed for a long time, and has become habitual; therefore it is not likely to be cured suddenly. For this reason, we should adapt our treatment to the more rational expectation of effecting a gradual recovery, than a sudden cure."*

Dr. Blackall's general habits of discrimination entitle his sentiments, on a question like the present, to considerable attention. In speaking of mercury, he says, "On the scirrhus or tuberculated state of the liver, a frequent cause of dropsy in this country, I have seldom seen it make any impression. It would be somewhat in its favour to add, that it is universally safe. I dare not assert this, since I have seen, in such instances, the mercurial habit superadded by continued salivation, and then the disorder become more complicated and more speedily fatal."†

Dr Farre, when treating of chronic enlargements of the liver, observes, "Patients suffering under the

the cure of what may be properly or improperly named liver complaint.—*Edit.*

* Surgical Observations, before cited, page 77.

† Observations on Dropsies, page 70.

diseases above described, are not, as far as I have observed, benefited by the operation of mercury. Few medical men now attempt to cure, by these means, tumours, in the restricted sense of the word, at or near the surface of the body; but it is more especially true, that such efforts prove altogether fruitless, when directed to the cure either of the tubera circumscripta, or diffusa; for by the time that the most careful examiner can distinguish them, the progress of the disease has been already so considerable, that the mercurial action tends only to exhaust powers, which art will subsequently in vain attempt to restore."*

Dr James Hamilton, Jun., also, has remarked it to be his experience, that "the ordinary mode of exhibiting mercury for the cure of chronic hepatitis, in this country, not unfrequently hurries on the disease, or, by impairing the constitution, lays the foundation for paralytic affections; and it may be truly affirmed, that it thus often shortens life."†

There are even some Indian practitioners of reputation, who, desirous of keeping in view the great difference existing between acute and chronic disease of the liver, have objected to the free use of mercury in the latter, though none are more sensible of its superior efficacy in the former state of disease. Dr Dick, whom Dr Saunders calls "a gentleman high in the medical profession, in Bengal, and of

* Morbid anatomy of the Liver, page 21.

† Observations on the Use and Abuse of Mercury, page 79.

much practice in Calcutta," says, "In recent attacks of liver complaints, after early bleeding, blistering, and the free use of laxatives, I never saw a case where suppuration came on, if mercury were freely used, and continued till the mouth was sore; and, if I be not much mistaken, it is in such cases that it has the best effects. In chronic cases, there is no fever, but only an obtuse pain in the side and shoulder, with a fulness in the side, and about the pit of the stomach, keeping up a constant uneasiness, mercury seems to me to have but little good effects; when used freely, it removes the symptoms at the time, but they generally return as soon as the mercury is left off."*

Where an alteration exists in the structure of the liver, it appears to me, that if mercury is capable of making any impression on the disease, it is when exhibited in small doses, at distant intervals. If a four-grain compound calomel pill, or five or six grains of the blue pill, given every night for some time, is not able to reach the complaint, this mineral will generally be ineffectual, and in augmenting the quantity till salivation is induced, we shall only be distressing and weakening the patient, without at all gaining upon his disease. Persons, in such a case, derive real advantage only from small undebilitating doses of mercury, that do not very sensibly affect the general system; and not from active, enervating courses, which disturb

* Saunders on the Liver.

every healthy process. "Though mercury be a remedy of signal benefit in altering the condition of action in the extreme vessels, it requires a very cautious and circumspect management. It requires to be slowly and gradually introduced into the system; *for the foundation of change, and the renewal of structure, depend upon a gradual, uniform, and extensive action upon diseased parts; action, violent, irregular, and partial, deranges general health, but does not ordinarily affect the seat of the disease.*"*

Having considered it my duty, in the former part of this essay, to controvert some of Dr Ayre's opinions on the pathology of the prevailing "*bilious*" disorders, it is with pleasure I remark, that his obscured pathological views do not lead to error in his practice; for no one can administer calomel more judiciously than he does. He condemns its use as an active purgative, and considers that one grain, or less, in twenty-four hours, is sufficient in ordinary cases; and therefore I may now quote his authority in support of the rules here laid down for the cautious exhibition of that medicine.

Mercury must be considered an admirable medicine on very many occasions; it has enjoyed the confidence of the profession above three hundred years, and Mr Pearson has justly remarked, that "not one medicine besides, derived from the ani-

* Jackson's Outline of the History and Cure of Fever, page 314. (1798.)

mal, vegetable, or mineral kingdoms, has maintained its credit with men, actually employed in extensive practice, during a tenth part of that period;" which is a sufficient proof of its value. But the remarkable efficacy of this mineral in some cases has led to its abuse; and this abuse seems to me so general, and is ordinarily followed by effects so permanent and destructive, as to call aloud for correction. Indeed, it may with propriety be questioned, whether mercury, notwithstanding its valuable curative powers, has not been a source of more real injury to the constitution of Englishmen, than it has, or can be for years to come, of good. When I recall to recollection the numerous cases of ruined health, from the excessive employment of calomel, that has come to my knowledge; and reflect upon the additional proofs of its ruinous operation, which are still daily presenting themselves; I cannot forbear regarding it, as commonly exhibited, as a minute instrument of mighty mischief, which, instead of conveying health and strength to the diseased and enervated, is made to scatter widely the seeds of debility and disease of the worst kind, among persons of every age and condition.

Perhaps it is not exceeding the truth to say that the mercurial oxides, especially calomel, are now daily given for the cure of disorders and diseases of every character, at every stage, and under every variety of circumstances; and, what is fraught with the weightiest evil, without care or discrimination.

It is not only the learned physician, or the well-educated apothecary, that is so extravagantly fond of this substance; but if the surgeon's dispenser, or apprentice boy, is called upon to take or to prescribe medicine, it is calomel; if the countryman wants physic, he, who formerly found jalap or salts to answer his purpose well, must now have calomel; if the delicate young lady needs a pill, she sends for blue pill or calomel;—and mothers, whether high or low, rich or poor, think nothing so good for their infants, as calomel, which they *pour in* with as little consideration as rhubarb or magnesia!*

That so powerful an article, taken or administered by all descriptions of persons, without care or discrimination, as to the dose or disease, must be attended with the most lamentable consequences, no one can with truth deny; for this medicine is not only a poison in excessive doses, but, as was

* Dr Blackall, of Exeter, also expresses himself very strongly on this subject. "Parents," says he, "have something to regret, who are so perpetually giving calomel to their children, without any distinction or care, as a common domestic remedy. And it is difficult to conceive on what view of the subject even practitioners proceed, who indulge in its use with less scruple than ever, with less attention as to dose, with less caution as to management, whilst they are observing and lamenting the daily increasing ravages of hereditary scrophulous disorders. It can hardly be, in the present day, from want of calomel, that such a taint is propagated." Indeed, the powerful and depressing effects of calomel on the whole nervous and vascular systems, unequivocally prove its poisonous qualities, and raise insuperable objections to its frequent employment in free doses.

remarked above, even in the ordinary doses of two and three grains, it is an active stimulant to the organs of digestion, and to the whole constitution. There is not another article in the materia medica, in common use, which, so immediately and permanently, and to so great a degree, debilitates the stomach and bowels, as calomel; yet this is the medicine which is sent for, and prescribed on every occasion; the most trifling, as well as the most urgent!

Its action on the nervous system is demonstrative of its being an article in its nature, inimical to the human constitution: since what medicine besides, in frequent use, will excite feelings so horrible and indescribable as calomel, and other preparations of mercury. An excessively peevish, irritable, and despondent state of mind, is a well-known consequence of a single dose of this substance. Dr Falconer, of Bath, in a paper where he forcibly animadverts on its abuse, observes, "*Among other ill effects*, it tends to produce tremors, paralysis, and not unfrequently incurable mania. I have myself seen repeatedly, from this cause, a kind of approximation to these maladies, that embittered life to such a degree, with a shocking depression of spirits, and other nervous agitations with which it was accompanied, as to make it more than commonly probable, that many of the suicides which disgrace our country, were

occasioned by the intolerable feelings that result from such a state of the nervous system."*

To set the poisonous qualities of mercury in a still clearer light, I would here insert an extract from Dr Hamilton's work on the abuse of mercury, and also from Dr Alley's observations on the hydrargyria, an eruptive disease which is sometimes produced by this mineral. The former gentleman says (page 24), "In a lady (whom the author attended some years ago, along with his intelligent friend Dr Farquharson), who had had such small doses of the blue pill, combined with opium, for three nights successively, that the whole quantity amounted to no more than five grains of the mass; salivation began on the fifth day, and notwithstanding every attention, the tongue and gums became swelled to an enormous degree; bleeding ulcers of the mouth and fauces took place, and such excessive irritability and debility followed, that for nearly a whole month her life was in the utmost jeopardy." Dr Alley observes (page 40), that he has seen the mercurial eruption appear over the entire body of a boy about seven years old, for whom but three grains of calomel had been prescribed, ineffectually, as a purgative.

Some may think, that these instances prove only idiosyncrasy in the individuals affected, rendering them in an extraordinary degree obnoxious to the

* Transactions of the Medical Society of London, vol. i. page 110.

pernicious effects of this single substance; that such peculiar dispositions, in respect of a variety of really innocent medicines, are every day met with; and, therefore, that the conclusions here drawn, touching the deleterious properties of mercury, are inconclusive. But this cannot be consistently affirmed, because the above instances of the poisonous operation of mercury are not, like the others alluded to, of rare occurrence; on the contrary, they are common, and are only two out of a vast number (not all equally bad) that have been, and are still daily witnessed, many of which are on record.

Dr Hamilton, Jun. observes, "In several cases, the author has decidedly ascertained, that ulcerations of the villous coat of the intestines of infants and young children have been induced by the frequent repetitions of doses of calomel." Does not this fact call upon the mother to abandon its use altogether in the disorders of her child, and to leave the administration of so dangerous a substance to the medical practitioner alone? And does it not demand more care and attention on our part, in prescribing this oxide, than has been of late observed?

There is a circumstance in the operation of mercury, which has hitherto been only hinted at in these sheets, but which is of no small moment, and ought to engage the serious and attentive consideration of the profession, as well as of all unprofessional persons, who are in the habit of taking

mercury themselves, or of giving it to their children,—I mean the permanency of its deleterious effects. An improper or excessive use of the generality of medicines is recovered from without difficulty; but it is not so when the same error is fallen into with the mercurial oxides. They affect the human constitution in a peculiar manner, taking, so to speak, an iron grasp of all its systems, and penetrating even to the bones, when incautiously employed, by which they not only change the healthy action of its vessels, and general structure, but greatly impair and destroy its energies; so that their abuse is very rarely overcome. When the tone of the stomach, intestines, or nervous system generally, has been once injured by this mineral, according to my experience, and I have paid considerable attention to the subject, it could afterwards seldom be restored. I have seen many persons to whom it has been largely given for the removal of different complaints, who, before they took it, knew what indigestion and nervous depression meant, only by the description of others; but since they have become experimentally acquainted with both, for they now constantly complain of weakness and irritability of the digestive organs, of frequent lowness of spirits, and impaired strength; of all which, it appears to me, they will ever be sensible. Instances of this description abound. Many of the victims to the practice are aware of this origin of their permanent indisposition, and many more, who are at present

unconscious of it, might here find, upon investigation, a sufficient cause for their sleepless nights, and miserable days.

It is to be lamented, that in our day, in severe cases, whether of disordered function, or actual disease, which resist the usual remedies prescribed under clear indications, salivation is frequently resorted to from some vague notion of its exerting an admirable, though inexplicable effect, when previous expedients fail; and thus, we have often every benevolent feeling of the mind called into painful exercise, upon viewing patients already exhausted by protracted illness, and whose only chance of recovery depended upon great care, and a soothing tonic plan of treatment, groaning under the accumulated miseries of an active course of mercury, and by this for ever deprived of perfect restoration. A barbarous practice, the inconsistency, folly, and injury of which, no words can sufficiently describe. I will venture to affirm that the man, who undergoes strong salivation in a chronic complaint, is never the same person, as to strength and bodily feelings, after it, as he was before*.

Let it not be thought that I am insensible to the value of calomel, and other mercurial preparations,

* Except in cases of syphilis, to talk of the *cure* of a chronic disease by salivation would be approaching to the absurd; but it is proper for me to remark, that it is quite different if it be excited to check an acute disease, especially in warm climates; here it is often the only and the effectual remedy.

or that it is my desire to undervalue them. By no means. I have already said sufficient respecting them, to prove the contrary; but it is too often forgotten in medical practice, that they are of a nature unfriendly to our bodies, which is a well established fact; and is, therefore, singly a proof that they ought to be exhibited sparingly, and with great caution. So far from being adapted to domestic use, calomel is a medicine which an unprofessional person should never presume to touch on his own opinion. When administered with care and judgment, it is sometimes invaluable, being capable of accomplishing the most desirable purposes; but in the hands of the uneducated and unskilful, it becomes a deadly weapon.

The combinations of mercury which my observation leads me to regard as most useful in indigestion, are calomel, with tartarized antimony or James's powder, guaiacum, and opium; or the blue pill, with James's powder, or the compound powder of ipecacuanha. A small pill of this description may be given every night, or every other night, in conjunction with any other medicine, excepting the mineral acids.

Rhubarb and ipecacuanha are both of great service in this complaint, especially in stomach affections, or where the biliary secretion is faulty or deficient. They are most efficacious stomachics and aperients, and have appeared to me to render altogether unnecessary any of the ordinary bitters and aromatics, as gentian, cascarilla, &c. in the

treatment of the great majority of the disorders of the assimilating organs. Rhubarb is inferior only to mercury in its power of changing to a natural colour, the very discoloured evacuations so common to such disorders—a change which is always considered most desirable. If it is not alone equal to this effect, a small dose of ipecacuanha, or tartarized antimony, added to it, will rarely fail so to increase the efficiency of the rhubarb, as to render it fully effectual. The value of this drug as a stomachic, and corrector of unhealthy motions, is not sufficiently known and appreciated. Mercury will often disappoint our expectations in the chronic affections of the liver and duodenum, in this country, when rhubarb is perfectly successful; the reason of which seems to be, that we often require a medicine, which combines a tonic or stomachic property, with that of exerting a direct salutary action on the duodenum, and the biliary ducts which terminate in it. Now mercury possesses only the latter power; but rhubarb unites the two. It has been judiciously observed, that as "when a disordered state of the stomach is induced by the bile" (a circumstance seldom occurring), "no bitters will be useful; so, if an unhealthy condition of the bile is induced by the stomach, no blue pill will avail;"* but we then order such bitters as rhubarb with great effect.

* Abernethy:—Manuscript of Lectures delivered at Bartholomew's Hospital.

If the virtues of rhubarb were duly prized, calomel and the blue pill would be in less use in the bilious disorders (as they are called), both of adults and infants. In the intestinal irritations to which the latter are subject, it is undoubtedly far superior to calomel as a common remedy. The frequency of bowel complaints, among young children, is evidently connected with the weakness of the intestinal canal at their early age;* there is then a deficiency of that tone of energy in the bowels, which, in persons of mature years, prevents the matters received into them from so soon suffering decomposition, and forming new and vicious combinations that irritate and disorder. Therefore, we might reasonably suppose, that a medicine which readily promotes a healthy flow of bile, and strengthens at the same time that it evacuates, would be much better suited to the tender organs of a child than calomel, which, though often a valuable remedy, is of a very debilitating, enervating nature. It has frequently been asserted, that children require large doses of calomel,

* A sentiment, quite opposite to this, has prevailed too much among some medical men; but the opinions of Magendie has every support that can be desired from reason, observation and experiment; and now that we see active mercurials so constantly and fearlessly given to infants, it may not be without effect to quote his words. "Instead," he says, "of considering the digestive organs of a new-born child, or even those of one very young, as being gifted with an overplus of strength, we must view them as much weaker than they will thence forward become."

Magendie's Physiology, vol. ii. p. 117.

and bear them better than adults, which appears to me an erroneous and dangerous sentiment. The mucus and slime, that so thickly line their intestines, may frequently render a moderate dose, or doses, ineffectual, if uncombined with any other aperient; but those who, on this account, augment the quantity, and repeat it, until it operates powerfully, pursue, to say the least, an unsafe and injudicious practice. I repeat it, that there is no truth in the practice of medicine more apparent and certain, than that the exhibition of large and repeated doses of mercury, for the cure of chronic maladies, is highly inimical to the constitution of all persons: they ought, therefore, to be carefully avoided. None but cases of emergency justify their use in the bowel complaints of children, the well known but neglected formula, that combines rhubarb with the sulphate of potash, being fully equal to the removal of most of the ordinary disorders of this class.*

So excellent a corrector is rhubarb of vitiated biliary secretions, and so efficient a deobstruent, that I have known five grains taken once a day for a month, to cause nearly the entire absorption of a large sarcocele, dependent upon great constitutional disorder. The bowels were always confined, the motions discoloured, the digestion bad, the

* About ten or twelve grains of rhubarb with eight or ten grains of the super-sulphate of potash or sal polychrest form a mild and, generally, sufficiently efficient purgative for females and persons in delicate health.—*Edit.*

flesh reduced, the strength greatly impaired; but this small quantity of rhubarb, dissolved in water, and taken daily an hour before dinner, produced a healthy flow of bile, with a sufficient and consistent alvine evacuation every day; relieving the patient, in every respect, in a very unexpected and gratifying manner. Within four weeks, by this simple means, the general strength was much recruited, the appetite and flesh increased, the countenance was recovering fast its wonted healthy look, the local complaint appeared one-third of its former size, and had the patient persevered in the use of the rhubarb, I am persuaded he would have perfectly recovered; but, feeling himself so much better, he neglected to continue the remedy, and consequently suffered a relapse. The blue pill had been previously given in this case, for some weeks, by a distinguished surgeon, but with results far inferior to what was afterwards obtained by the employment of the rhubarb.*

Ipecacuanha is another article which operates directly, and in a very salutary way, on the internal surface of the stomach and bowels, and through them on the skin and biliary secretion, and which

* Dr Marshall Hall thinks very favourably of the virtues of rhubarb in the mimoses. He observes (page 94 of the second edition of his Essay), that he has found rhubarb and magnesia of great use, when there was "diarrhœa, with scanty, fetid, and dark-coloured motions."—"Indeed, in all cases where the more active purgative medicines have been employed in the commencement, rhubarb appears to be particularly adapted, from its tonic properties, to complete the cure."

may be advantageously given to dyspeptics, either alone, or combined with rhubarb. An excellent tonic pill is made by uniting one grain of ipecacuanha with two grains of powdered rhubarb, and two grains of soap; to be taken, twice or thrice a day.

The tartarized antimony has an operation somewhat similar to that of ipecacuanha, and may often be used with good effect, as an alterative. This medicine is very much used on the continent in bilious and gastric disorders, and is there considered fully capable of fulfilling the indications for which mercury is so commonly ordered in this country. It will be universally acknowledged, I presume, that this antimonial preparation is a remedy of no mean power, in cleansing the primæ viæ, and promoting a soluble state of the bowels, while it exerts a very salutary action on the whole cutaneous surface; if, therefore, the properties of rhubarb, either singly, or combined with the emetic tartar, are really what they are now described, we may conclude that they may be often advantageously employed as substitutes for mercury.

The experiments of M. Magendie, and the usual effects of emetic tartar upon the animal economy, prove that this substance exerts a specific influence on the mucous membranes of the alimentary canal and lungs, by which we are frequently able to accomplish very desirable objects in morbid invasions of these parts. A similar influence over these organs is possessed by ipecacuanha. They both em-

inently promote expectoration, determine to the skin, and increase the peristaltic action of the bowels; and if an animal is killed by an over-dose of the former substance, death, in every instance, is found to be produced by violent inflammation of the substance of the lungs, and of the mucous membrane of the alimentary canal, extending from the upper orifice of the stomach to the anus. The result is still the same, if the active principle of the tartarized antimony be thrown into the jugular vein, or be simply absorbed from any part of the body.* These phenomena account for the remarkable power often possessed by ipecacuanha and tartarized antimony over severe dysentery, and other unhealthy states of the bowels, which are too generally looked upon as *bilious:* and they corroborate, at the same time, the truth of the opinions given in this essay respecting the nature of dysentery, and of the other disorders which I believe to be erroneously considered as essentially connected with hepatic affection. Dr Balfour's Illustrations of the power of Emetic Tartar afford additional evidence in favour of my views.

In treating those morbid affections of the digestive organs which centre in the stomach, there are two medicines which appear to me of great value. One is, the nitric acid, which, though it made a great noise at one time in the cure of certain dis-

* See M. Magendie's paper on the influence of Emetic Tartar on man and on animals.

eases, and not without reason, seems now almost entirely laid aside as an internal remedy; the other is Brandish's caustic alkali, a medicine but little known, even for what it was originally recommended (scrophula), and not at all in the maladies under review.

With me, the nitric acid has repeatedly succeeded in restoring the assimilating viscera to the performance of their healthy functions, when mercury, in every form, was either useless or injurious, and where no benefit accrued from the employment of other medicines. It acts as a tonic and alterative to the stomach and general habit, and is best adapted to the cure of that modification of indigestion in which the stomach and duodenum are chiefly concerned; where, along with a great deal of debility, there is heat and pain in the epigastric region, vomiting of food, want of appetite, burning in the hands and feet, or of the general surface, and especially when, with the existence of these symptoms, mercury has been freely thrown in, under the idea of there being a "*liver complaint.*" It strengthens the stomach and duodenum, and at the same time promotes their healthy secretions; and from being powerfully refrigerant, it proves a grateful, as well as an effectual medicine, when morbid heat, either partial or general, internal, or external, is a troublesome symptom. In slight and recent cases, it is of little or no service; the severe and tedious being those in which its

powers are the most conspicuous, which renders it the more valuable.

It is too common a practice, in this form of the complaint, to give large and frequent doses of calomel as a purgative, and otherwise, when it never fails to sink the strength, and to excite the most horrible nervous sensations; here this acid will be found strikingly restorative. In the beginning, it may be taken in doses of six drops three times a day, in a large wine-glassful of distilled water, sweetened with sugar, if agreeable, and gradually increased to eight or ten drops.

The mineral acids are considered by competent judges, as very useful in the advanced stages of indigestion; and the nitric acid has also been praised for its effects in chronic inflammation of the liver, occurring in India; but it has never gained that confidence among medical men, in the treatment of these complaints, that it merits, though its action on the skin, and its combining within itself the properties of a tonic, alterative, and refrigerant, clearly point it out as a valuable remedy. Dr Scott considered it, in most instances, far superior to mercury in the chronic hepatitis of the East. Its power in correcting general and local morbid action is apparent, from its effects in restoring the constitution to a measure of its former health and strength, after it has been impaired by protracted or severe courses of mercury; and in healing the frightful ulcerations, so often the consequence of such courses, in which its efficacy is scarcely

equalled by any known medicine. The proofs of its value which were elicited during the controversy that took place some years since respecting its antisyphilitic powers, are sufficient to convince us, that it demands a greater share of attention from the profession; and, from recent investigations into the nature of the ordinary syphilitic diseases, it is no longer doubtful whether mercury, or the nitric acid, is in general the safest and best remedy in many of these disreputable complaints.

I have known this acid, within a week, to restore, in a great measure, the skin of dyspeptics from the dark, sallow hue, so common in such cases, to its natural appearance. In these patients, mercury had failed to produce this, or any other beneficial change; but the alteration from the use of the acid has been so striking, as to excite the attention of their friends, and to be hailed by them as a certain sign of returning health, in which they were not disappointed.

The alkali recommended by Mr Brandish, for the cure of scrophula, is often of signal service in stomachic weakness and disorder. It is decidedly tonic to this part, and to the whole of the alimentary canal, and operates as a permanent stimulus to the whole system, increasing the appetite and strength, and exhilarating the spirits in a remarkable manner. All the alkalies are occasionally found of excellent use in these maladies; they are efficacious correctors of morbid acidity, and have other effects on the stomach and bowels that are

very grateful and beneficial. Reasoning from the healthy changes wrought by it, I should say, the alkaline solution of Brandish possesses every good quality of the most powerful alkalies, and alkaline earths, in common use, without their objections; as it possesses no deleterious property, and may be continued for several months in succession, not only without injury, which cannot always be avoided in prescribing the former, but with increased advantage, both as a tonic and alterative.

Like the foregoing acid, it is of most service where the stomach is the chief seat of disorder; but instead of being applicable to the cases where heat is a troublesome feeling, it is in those in which coldness of the feet, chilness of the general surface, languor, fluttering at the pit of the stomach, and morbid acidity, are the most prominent symptoms, that it displays its full powers. The acid cools while it strengthens; this gently stimulates, and imparts an agreeable glow to the whole frame. It is likewise often of as much use in recent, as in old and bad cases; and it favours the natural action of the bowels.

Some persons, who suffer from intestinal weakness and disorder, or the second modification of indigestion, derive much and lasting advantage from this alkali; and, if I mistake not, it is much more exhilarating to the spirits, where it agrees, more strengthening also, and a more effectual alterative than the acid.

Every one will acknowledge how requisite it is

to preserve and increase the strength, in advanced stages of these disorders, for which purpose it is common to prescribe light bitters and aromatics, in conjunction with other more efficient measures; on this account, the nitric acid, and the caustic alkali, lay strong claim to general confidence, from their being at once eminently tonic and alterative, supporting the strength more permanently, and in a way far superior to bitters and aromatics, at the same time that they are capable of removing the cause of the complaint.

Many ladies in the higher circles, who pass a great part of their time in large towns and cities, in overheated rooms, and who take little exercise, from these causes become pale and weak, lose their appetite, and are distressed with constipation of the bowels, and many uncomfortable sensations about the region of the stomach, particularly after eating; to such, the alkaline solution will prove a mild, but exhilarating and excellent tonic, that tends effectually to remove constipation, and to restore the energies both of body and mind.

At the commencement, it should be given in doses of a tea-spoonful morning and evening, and gradually increased to two tea-spoonfuls. Fresh beer, and milk and water, cover its taste the best; and whatever it is taken in, not less than three-fourths of a tea-cupful should be used as a vehicle, since the nature of the remedy requires it to be diluted with a considerable quantity of some fluid. If beer be employed for this purpose, it should be

quite fresh; and acids of every kind, with all sub-acid fruits, must be altogether avoided, while taking this alkali.*

I would recommend this alkali to the attention of persons who suffer from a long residence in a warm climate. The chief complaint of these invalids is, a deficient and irregular action of the stomach and bowels, which they will find the alkaline solution well adapted to remove.

The employment of metallic tonics, and indeed of many other strengthening medicines, appears to be much feared by some late writers on indigestion, but without sufficient reason. No doubt many practitioners have done harm by their premature or otherwise improper exhibition, but this does not in any degree militate against their utility. Their use is frequently contraindicated in the inflammatory kind of habit or condition, mentioned at page 108, but in that of simple debility, described before it, they are generally very useful, and sometimes of more service than any other descrip-

* As this alkaline solution is not generally sold by druggists, I have thought it advisable to mention, that it may be procured from Mr Watts, chemist, &c. 478, in the Strand.

[An excellent alkaline solution may be conveniently prepared in the following manner.—Take, of hickory ashes, one quart, soot about a tea-cupful; Pour on these a gallon of boiling water, and after it has stood a day or two decant or filter for use. As this is probably a much less concentrated preparation than the one recommended in the text, the dose may be at first a table-spoonful, and subsequently increased gradually to a wine-glass or tea-cupful three times a day, always diluted with at least an equal quantity of water.—*Edit.*]

tion of medicines. Of course there is a great difference in cases, with respect to the effect resulting from the administration of particular metals. In some cases, iron will prove the most available; in others, bismuth, and in a third class, nitrate of silver, or sulphate of zinc. A recent author* has represented the nitrate of silver as being capable of superseding all the other metallic tonics, but in this, he is, in my opinion, quite mistaken. I believe it is a most serviceable remedy in many cases of indigestion, whose chief seat is in the stomach, but in at least as many, both iron and bismuth singly are more appropriate and useful. It will not be expected that I should here particularize the instances to which they are most applicable, as they hardly admit of description; it is sufficient for me to say that they are those of debility, unaccompanied with inflammatory action. Bismuth is well known to be of superior value where pain in the stomach is a prominent symptom; and I have reason to think it is of equal service in many cases of dyspepsia, where there is not much pain in that organ, but great local and general weakness. The sub-carbonate of iron appears to me to be the best preparation of that mineral, and rhubarb, or ipecacuan, with a minute dose of aloes, may be advantageously joined with it.†

* Dr Johnson, *on Morbid Sensibility of the Stomach.*

† We have witnessed most admirable effects from the nitrate of silver in dyspeptic cases attended with great irritability of the

I have not used the quinine much in dyspeptic cases, but, nevertheless, consider it a very serviceable medicine. Its efficacy is increased by uniting it with rhubarb.

The daily, or almost daily, exoneration of the bowels is of essential importance in all disorders of the digestive viscera, but this object must be accomplished by very mild aperient medicine, assisted by a diet of a laxative nature. Purging, especially with calomel, deserves severe reprobation for the reasons already advanced at page 117. It commonly excites the most distressing sensations in the patient, and provokes every bad symptom. As a gentle aperient, the following pills may be recommended for their mildness and efficacy. Aperients, given in the form of pills, are almost always by far the most proper in indigestion.

℞ Extr: Colocynth: comp:
Pil: Rhei comp: āā ℈j
Pulv: Ipecac: gr. vj
Ol: Carui, gr. iv.
Saponis Duri gr. xiv. M. ut fiant Pil: xij, equibus sumantur una vel altera, omni nocte, horâ decubitûs.

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stomach manifested by pain after eating, &c. We have used it after the following formula:

Nitrate of Silver	gr. x
Pulv. Gum Aloes	
Ipecacuanha, of each	xvi
Denarcotized Opium	iv.

To be made into a mass by means of conserve, or other convenient substance, and divided into twenty pills, one of which may be taken two or three times a day. *Edit.*

Or these,

℞ Aloes Spicat: ℈j
Scammoniæ Pulv: gr. xv.
Extr: Rhei ʒss
Bacc: Capsici pulv: gr. vj
Ol: Caryophill: gtt. v. Ft. pilulæ xv. quarum sumat una vel altera, horâ somni, pro re nata.

Common saline purgatives are almost altogether inadmissible in these complaints. The natural saline waters of Cheltenham and Leamington are, however, unquestionably of great utility in many of the disorders now treated of, but I have reason to coincide in the truth of the opinions long since delivered, by Dr Saunders, that the valetudinary visitors to those places may usefully be divided into three classes, viz. those who gain unequalled benefit from the waters; those who obtain neither good nor harm; and those who suffer injury. The latter class are composed, principally, of persons who labour under stomach disorder, in every instance of which we may with certainty predict, that active aperients will be found extremely injurious; and this is, for obvious reasons, especially the case, if the medicine be suspended in a large quantity of water. Therefore, those suffering from abdominal disorder, who resort in search of health to the wells of those elegant and delightful towns, should be careful to ascertain the nature of their symptoms before they venture on drinking the purging waters, lest they return worse than they went.

As active purging has been so general a practice in these maladies, and large doses of calomel are thought particularly efficacious, I would here remark, how contrary this mode of proceeding is to that of Mr Abernethy, and Dr Hamilton, Sen. whose writings are so much admired by the profession. Dr Hamilton prescribes purgative medicines to excite, but *not to stimulate* the bowels, and he combines with them, generally, *unirritating* doses of mercury. Mr Abernethy's practice is still more gentle; he says—"As I have found the lenient plan of treatment (that of exciting the peristaltic action of the bowels, so as to induce them to clear out the whole of the residue of the food, without irritating them, so as to produce what is ordinarily called purging), particularly successful, I have rarely deviated from it." (page 70).

In respect to the adaptation of the foregoing remedies to the particular forms of indigestion described in the second chapter, I would observe, that in stomach affections, the pills of rhubarb and ipecacuan, with soap; iron in some form; bismuth; the alkaline solution; and nitric acid, have appeared to me the most efficacious medicines to be used in the day, with which, a mild mercurial alterative may sometimes be given at night with no small advantage. Mercury however, in any form, is less called for in this modification of the malady than in the second and third varieties (page 100); and often cannot here be borne at all. When required, the blue pill, combined with compound powder of

ipecacuan, or rhubarb, is the best mode of giving it. I have witnessed the most satisfactory changes from using the rhubarb pill, mentioned at page 144, during the day, with the following pill every night, or every second night:*—

℞ Pil: Hydrargyri, gr. iv.
Pulv: Ipecac: Comp: gr. i. M. ft.
Pilula.

When the small intestines seem greatly affected, mercurial preparations are generally very serviceable, and the following has appeared to me the most efficacious combination. If much pain be present, the quantity of opium ought to be increased a little, and should the symptoms be urgent, the pill may be ordered twice a day in the commencement and afterwards once a day, or once in two days:—

℞ Hydrarg: Submuriatis, gr. xij.
Antimon: Tartariz: gr. i.
Guaiaci Gum: Pulv: gr. xxiv.
Pulv: Opii, gr. i.
Conf: Aromat: q. s. ft. Pil: xij.

Together with the mercurial, the tartarized antimony in solution; the rhubarb pills; quinine; or compound decoction of sarsaparilla, may be given during the day. The alkaline infusion of sarsapa-

* Combined, of course, with a proper diet and regimen. These points I do not advert to here, as I shall presently notice them somewhat at length.

rilla, as well as the ordinary decoction, I have known of great service in this form of the complaint.* The former preparation appears most applicable and useful when considerable debility is present, or where the stomach, as well as the intestines, are much weakened and disordered, and especially if morbid acidity of the stomach is a prominent symptom. Sarsaparilla is a medicine of superior utility in plethoric habits, and where the excited form of indigestion (page 109) appears.

In the present variety of dyspepsia, aperients are generally indicated, on account of the constipated state of the bowels usually existing. The object in employing aperient medicine should be to gain a comfortable exoneration of the bowels daily, or nearly so, with as little irritation as possible, as already remarked. In every respect we ought to imitate the healthy operations of nature; and, as in this particular, they are at the same time efficient, and not only unirritating, but accompanied with great relief, so should the discharges procured by medicine be as nearly as may be attended with similar results. But these results can never be insured, in chronic diseases, by purging. Patients

* This alkaline solution may be prepared in the following manner:

Take of sarsaparilla root sliced and bruised, four or six ounces; liquorice root sliced, one ounce; lime water, four pints. Let these digest together in a covered vessel for twenty-four hours, during which time they should be frequently stirred and shaken. When strained it is fit for use. About a pint of this, divided into three equal doses, may be taken daily.—*Edit.*

can hardly have a milder aperient pill than that prescribed at page 153. If they do not suit the patient's habit, the compound decoction of aloes, or a seidlitz power in warm water, may perhaps be found suitable. These are mild aperients of the very best description.

It is in derangement of the biliary organs, that such mild aperients as are presented in the natural saline waters of Cheltenham and Leamington often prove of the utmost service; and with these, which are taken every morning, or every other morning, a mercurial pill at night is conjoined with the best effects. It must not be forgotten, however, that tonics are in this form of the disorder also very generally indicated; the most appropriate are rhubarb, alkaline solution and quinine.

The nitro-muriatic acid bath, recommended by the late Dr Scott, is, in my opinion, of no small advantage in some severe affections of the liver and small intestines. Sometime ago I met with a most severe case, that demonstrated its usefulness in a very gratifying manner, for the patient quite recovered from a most lamentable condition by its employment alone. In this example, ulceration, or a state nearly approaching to it, seemed to have taken place in the alimentary canal, for the patient had ulceration in the throat, with extreme tenderness and pain in particular parts of the abdomen, and occasional discharges of blood and pus.

When indigestion depends on the existence of a contraction in the rectum, the principal means of

relief is the passing of a rectum bougie every other day.* An alterative pill every other night may, perhaps, be indicated at the same time, and sometimes the tonic pill of rhubarb and ipecacuan, or the alkaline infusion of sarsaparilla. To procure a free evacuation of the bowels in this modification of the disorder, the use of the clyster machine is often of eminent service. The patient may throw up a pint of thin gruel, or linseed tea, every morning, or four times a week, with the view of evacuating the lower bowels, without irritation. If there exists much irritability in the rectum, this injection will be found very soothing and useful. In strictures of the rectum, some surgeons recommend the bowels to be rather freely acted on by mild aperients, during the process of cure, but according to my observation, this is not an eligible plan, on account of the irritation it occasions.†

* For the management of this part of the cure, I must refer to books on Surgery. Some useful hints connected with this point will, however, be found in my volume on *Domestic Medicine* already referred to.

† I ought to have remarked in the second chapter, that when stricture in the rectum has existed for a long time, and the contraction has become very considerable, the patient generally labours under peculiar nervous depression and agitation, recurring in paroxysms, or fits, so that he will be for a little while tolerably free from any unusual degree of nervousness, and then it will suddenly attack him with great, and sometimes an overwhelming force. I have lately met with two or three patients in which this distressing feature of the disease was very strongly marked, and that it entirely depended on the existence of a close contraction of the lower intestine was evident, from its having been quite removed by the use of the bougie alone. One of these patients used

In regard to the treatment of local pain and uneasiness, so common in indigestion, I would observe that in my practice, general remedies directed to the fulfilment of the indications, noticed at page 117, have almost uniformly been far the most effectual. When pain and soreness exist at the pit of the stomach, or in the side, or chest, &c. it is very common to recommend the application of leeches, or the cupping glasses, with or without a blister; and in rather full habits, bleeding from the arm is not unfrequently practised for the removal of these symptoms; but I am firmly persuaded that such measures are not generally the best, even when this kind of inconvenience is considerable, and also that they are very often attended with injurious consequences. My reasons for this opinion will be given in the next chapter, when referring to the treatment of indigestion associated with a fulness of blood in the head. Very often have I seen such symptoms quite removed, even in full habits, by the proper employment of the foregoing remedies, after blood-letting and blistering, in various forms, had been used with only a partial and temporary benefit at the best, always followed by

to be attacked by these nervous fits at night, generally after the candle was put out in his bed-chamber, when they would come on accompanied with so great a sense of oppression about the chest, and of suffocation, as would compel him instantly to rise from his bed and seek for a light, which would have the effect of relieving him more or less completely. Before these attacks commenced, this person was freer than most men from a sense of nervousness.

some degree of injury.* The local applications I would advise in such cases are warm fomentations two or three times a day, and when the tenderness of the part will admit of it, frequent gentle friction with the soap liniment.

In regard to the particular treatment applicable to the inflammatory or excited form of dyspepsia, mentioned at page 108, and to that in which simple debility is manifested, I have only to remark here, that in the former case, we must not in the beginning attempt the use of direct tonics, but trust to the efficacy of mercurial alteratives with sarsaparilla, tartarized antimony, and rhubarb and ipecacuanha, joined with a very mild diet, and much exposure to country air, to improve the pa-

* The superior value of the proper employment of alterative medicine, with a correct diet and regimen, in these cases, was particularly exemplified in the case of a dissenting clergyman, whom I lately visited. This gentleman is decidedly of a full habit, and has been labouring under indigestion for three or four years, accompanied with almost constant pain across the stomach, which frequently attacked also the side and chest during the winter months. He had been often bled, leeched and blistered, at intervals, for the removal of these symptoms, without any satisfactory or permanent benefit, although medicines were likewise given internally at the same time. It appeared to me that the principles of preserving the strength unimpaired, and of soothing local irritation, had not been sufficiently attended to in this case, and therefore the patient gained no real and lasting advantage from the treatment pursued under more than two or three different practitioners; and if the results of another mode of proceeding, founded on the principles above inculcated, may be considered as conclusive on the subject, this was a correct view of the state of the case, for the patient perfectly recovered in three months from the adoption of this method.

tient's condition, and so to augment his strength that he may be able to bear quinine, bismuth, iron, &c. and have his recovery thereby established.*

Diet has always been considered a subject of no small moment in the treatment of the present complaint. The grand maxim with regard to it is, to eat and drink sparingly, at stated intervals, and of food the most digestible, and that agrees best with the individual. No bilious or dyspeptic person should eat more than four times a day, and those periods ought to be, as near as possible, at regular intervals of four or five hours; say eight, twelve, four, and nine o'clock. It is a common, but very erroneous and injurious supposition, that such patients ought to eat little and often; because by taking food in this way, scarcely two hours elapse throughout the whole day without something being swallowed, by which means the stomach has no time for the perfect digestion of the previous meal, and is kept in a constant state of irritation and disorder. No rest is given to it, and therefore instead of gaining strength, it loses it. It may be safely received as a general rule, that food should not be taken in the intervals of meals, and a want of this kind will seldom be felt by those who adhere to the hours just mentioned.†

* See the directions at page 406 of my *Modern Domestic Medicine.*

† This testimony is at direct variance with the opinion expressed in the often repeated saying of the late Dr Rush, that "the stomach, like a school boy, was always in mischief when idle.—*Edit.*

Where a considerable degree of hardness exists in the pulse, with much feverish heat generally, an inflammatory tendency exists in the system, when a diet wholly vegetable, and even a total abstinence from wine, must, for the most part, be observed, and is strikingly beneficial. The best vegetables are, turnips, brocoli, French beans, asparagus, and potatoes; no other should be taken. In this state of the complaint, light, plain puddings are allowable, but pastry is altogether inadmissible in every description of case.

In the greater number of instances, however, the hardness of pulse just noticed is not present, and then an animal diet is the best. Mutton, venison, lamb, and tender beef, are the most wholesome and digestible of meats; and next to these come partridge, pheasant, fowl, chicken, and hare. Of either of these, a small quantity roasted and little done may be taken at dinner, it being seldom proper for a dyspeptic to eat animal food more than once a day. The flesh of full grown animals is to be preferred to that of young ones, and I know no exception to this rule. Some medical men, however, have gone so far, and erred so widely, as to assert the reverse of this to be the truth, but they are blind leaders. Preference has, indeed, been given to veal over beef, by some physicians of great judgment, who agree as to the superior digestibility of the flesh of full grown animals in general; but, according to my experience, it is a preference that ought not to be maintained, for I have found

few articles of diet more indigestible and irritating than veal, and, therefore, in my practice, it is universally forbidden to those of weak digestive powers. Full grown tender mutton and venison are unquestionably the most digestible, and best of all meats. All salted and dried meats is inadmissible, and boiled fresh meat of any kind is not quite free from objection in severe indigestion. Excepting oysters in their natural state, every sort of fish is bad in the present disorder, and must be altogether avoided, at least in the beginning.

In common language, fish is called a *light* article of diet, but it is an error to suppose it to be easy of digestion. It is given to patients convalescent from acute diseases, in preference to flesh, not because it admits of a more ready solution in the stomach, but on account of its exciting less heat and fever. Both vegetable and animal food done a second time is very objectionable, and, therefore, hashes, harricoes, stews, and the like, must make no part of the dyspeptic's cookery. In all cases, plain biscuit is preferable to white bread, but well-made brown bread is better than either, when the bowels are confined, and there is strength of stomach sufficient to take it.

Generally speaking, all slop fluids are much more difficult of digestion than solids, and a weakened stomach is quite incapable of digesting even the ordinary quantity which is taken in health with satisfaction and benefit. It is for this reason that broths and soups are injurious to most dyspeptics,

and that drinking too freely of soup, tea, and the like, will sometimes throw such persons almost into agonies. They should therefore be abstained from as much as possible.

Port wine is almost invariably hurtful, but a little foreign white wine taken after dinner, is sometimes useful. The best wine is old sherry, but with some patients good claret answers very well. If wine cannot be taken, a little weak brandy and water may sometimes be tried, but it is what I should seldom recommend, and ought in all cases to be changed for wine or beer, as soon as possible. Mild home-brewed beer generally agrees better than wine or brandy. It ought not to be strong ale, which is at all times difficult of digestion; neither should it be poor weak beer, but that of a moderate strength or body. There exists a general prejudice against the use of beer in indigestion and bilious complaints, but I cannot help thinking it is, in the majority of instances, without substantial foundation. If patients are properly treated, they will, in general, find *good* beer to agree very well. To quench thirst in the intervals of meals, nothing can be found equal to soda water: it is exceedingly grateful and effectual, and that made with the soda powders appears to me to be much better than the bottled water.* For the

* The best soda water is made with toast and water, instead of plain water. The toast has so much of a softening quality, that it imparts an additional spirit to the soda water prepared in

partial or general heat and feverishness so often present in this malady, it is an appropriate and efficient draught, and in the summer is particularly useful. It should then be constantly drank in preference to any other liquid. Well made toast and water is likewise a proper drink, and so is lemon or orange tea, that is, lemon or orange-peel infused in boiling water. The latter possesses a stimulus which is very useful to some disordered stomachs.

Tea, cocoa, or thin chocolate, made with water, may be taken for breakfast, and at tea-time; with biscuit, bread and butter, or dry toast. Rolls, and all other spongy bread, are bad; and coffee must be wholly forsaken. One fresh lightly-boiled egg may be taken at breakfast, if it agrees. Whatever liquid is taken in the morning and evening, the patient should not exceed a common breakfast-cupful at each time.

The supper should be very light, and small in quantity, consisting of a roasted apple, or potatoe, or an egg lightly boiled, with a biscuit, or some bread and butter. In summer, a little good ripe fruit in season will make a very wholesome supper. A small tumbler full of mild beer may likewise be allowed if it agrees, and the portion of food then taken be solid. Some dyspeptics find well-made grit or oatmeal gruel, with or without milk, to form an agreeable and wholesome supper.

this manner, and renders it both more agreeable to the palate, and more grateful to the stomach. In winter, the water should be lukewarm.

The food should be well masticated, and quietness, with rest, observed for at least half an hour after each meal. Digestion almost invariably proceeds much better in a sitting, than in a recumbent position.

The Scotch oat-cake is wholesome, and very easy of digestion, and many dyspeptics will find great advantage from frequently eating it (when they can get it) instead of bread. Its aperient qualities are an additional recommendation.

Dr Johnson has strongly recommended (in his *Essay on Morbid Sensibility of the Stomach*) water gruel as a very nutritious unirritating species of food for dyspeptics, and he seems to think it universally of superior value in such cases. In this advice it appears to me that he has not sufficiently considered the difference existing between that form of indigestion (see page 108) in which a state of general excitement or inflammatory tendency is conspicuous, and that where debility exists without this tendency. In the former cases, no doubt such gruel is a most useful food, but in the latter, which are by far the most common examples, it is not found suitable, on account of its speedily acidifying, and thus proving oppressive and irritating. In these latter cases, gruel made with a large proportion of good beer, instead of water, will be found particularly easy of digestion, and very nutritious. For the majority of dyspeptics, it forms the most wholesome article for supper that I am acquainted with.

As, contrary it would seem to the sentiments of professional men in general, I consider good malt liquor the most friendly to the human constitution of all fermented liquors, perhaps I ought here to remark farther on this point, that it is the base quality of that article, as now generally or universally sold, that has brought it into so much disrepute. No man can answer for the effects of the *stuff* usually sold as beer; but good home-brewed beer of a moderate strength will be found to suit the majority of dyspeptics uncommonly well, agreeing better than wine, since it is far less disposed to acescency, and better fitted to act as a stomachic, and therefore to invigorate both the digestive organs, and the constitution at large.*

If malt liquor will not agree, I recommend the use of soda water, or toast and water, made as above directed.

A correct Regimen is of the utmost consequence, and a strict and constant attention to it is absolutely necessary in order to obtain a perfect cure. All sedentary occupations must be forsaken as much as possible, and if they can be entirely given up, the prospect of complete relief will be far greater. Indeed, considerable and permanent advantage can only be obtained, in the majority of instances, by relinquishing in a very great measure all such en-

* The infusion of hop, contained in all good beer, is a very useful bitter tonic, that tends to strengthen the stomach, and invigorate the whole frame.

gagements, and quitting the confined atmosphere and late hours of the crowded city, for the pure, dry, bracing air of the country, with its early rising, and active exercises. It is the common neglect of such a regimen that makes indigestion so rarely and imperfectly cured; for where a high state of chronic debility, and nervous irritability, has been induced by long continued exposure to the depressing effects of confinement, and intense application to business, literary pursuits, or pleasure, no medicine, nor even diet, can be employed with much effect as a substitute for country air, daily active exercises, cheerful company, and early rising. The patient should quit his bed by six o'clock in the morning in the summer, and by seven in the winter; and after partaking of a light breakfast, take exercise freely for two or three hours before dinner. After dinner, gentle exercise should be again taken for an hour or two. Of all exercises, those of walking and riding on horseback are the most beneficial, and, where the patient's means and strength allow, they should be used alternately; but when the strength is much reduced, horse exercise is almost invariably to be preferred.

The power of daily active exercise* in the open

* The following observations respecting the value of exercise, in my *Treatise on the Art of Prolonging Life*, refer to a point which appears to me so worthy of attention, both from the public and profession at large, that I would beg leave to insert them here.—"I would here bespeak the reader's attention to the dif-

air in curing indigestion is very great, indeed such as would appear to the majority of persons almost incredible; and, therefore, it cannot be too much

ferent sections of this chapter, and more especially to that which adverts to the excellent and various uses of *exercise;* being convinced that while all these subjects are but too little attended to, and their value too imperfectly known, that of exercise demands particular regard, on account of its remarkable effects on health and longevity. To all invalids it is a subject of the highest moment. None will accuse me of undervaluing the advantages resulting from attention to diet, in the cure of disease; but it is proper for me to state, that there appears to me one grand point of superiority which exercise in the open air possesses, in this respect, over even diet, which is, that it is capable of exerting a direct and positive curative effect, while the effects of diet, in the same circumstances, are rather negative than positive. In using proper food, when afflicted with any corporeal malady, we cut off a principal source of irritation, and take an effectual means of nourishing and strengthening the body, and thereby of assisting nature in its efforts to free the constitution from an unwelcome and oppressive visitor; but beyond this the virtues of suitable food can scarcely be said to extend. On the other hand, exercise has often a direct and powerfully curative effect, from its accelerating and equalizing the circulation, when tardy and irregular, from its also strengthening the vessels and nerves, facilitating the excretions, and greatly improving the tone of the digestive organs. From a consideration of these facts, we see the reason why a correct diet should often fail to do little more than preserve the patient from getting worse, and that an efficient regimen is found absolutely necessary to produce much positive amendment, or to perform a sound and lasting cure. To illustrate this subject still further, we may advert to the case of a person suffering under severe chronic gout, or an aggravated attack of indigestion, and we shall often find, that if such patients attentively observe a suitable diet, they gain much advantage: but if they go a little beyond this attention to diet, supposing it is even combined with skilful medical treatment, the gouty man, in numerous instances, is still very liable to frequent fits of his tormenting disease, and will not unfrequently find himself getting more feeble, and the fits to gain

insisted upon by the physician, as an indispensable requisite to insure perfect freedom from this complaint. Many medical men lay great stress upon attention to diet, as necessary in the treatment of this and other chronic diseases, and so it is; no one acquainted with my writings will suspect me of undervaluing it, but I am fully persuaded that regimen is of still greater moment, and experience proves, that exercise is the most essential branch of the athletic regimen. I am disposed to think that exercise is not so strenuously recommended as it ought to be, or its virtues so fully known as they deserve.

Cheerful company and enlivening conversation,

an increasing power over him; while the dyspeptic experiences weakness of stomach, and general debility remaining, with a liability to a renewal of his disorder, on the operation of slight causes. But should these patients become convinced of the value of regimen, in the sense now attached to it, and enter into its adoption with spirit and perseverance, they very soon discover that they are using means which have a superior and remarkable power in resolving obstructions, and in so facilitating and regulating all the secretions, and imparting an increase of tone to every function of the body, as to afford them a most flattering prospect of being at length enabled entirely to conquer their disease. Under the operation of this regimen, the gouty sufferer finds his crippled limbs to become free and strong, his digestive powers to be augmented, and his spirits surprisingly exhilarated; and the dyspeptic bilious subject experiences an equally beneficial change in the increased tone of his stomach and bowels, in the more healthy secretion of bile, the keenness of his appetite, and the greater quantity of food he can take, not only with a relish, but without the uneasiness he before felt severely from indulging in a much smaller quantity; effects which both have found diet and medicine could only *partially* produce."

with proper clothing, are also subjects of importance. The feet and chest should be kept especially warm, and if the debility be great, with a considerable reduction of the natural heat of the body, a flannel waistcoat worn next the skin during the colder months will be very proper. The bed clothes should be no more than sufficient to keep the patient comfortably warm, and a mattress is always preferable to a feather-bed.

The value of a pure air in dyspeptic cases being universally known, need not be insisted on. A dry bracing air is generally required.

As an auxiliary remedy, the tepid bath merits attention. Some people suppose the warm bath to be relaxing, but when properly used in the present disorder, it generally proves very refreshing and strengthening. From 90 to 95 degrees is the best range of heat for dyspeptics, and the proper time for resorting to the bath is in the morning, between breakfast and dinner; the patient using it three or four times a week, and remaining in it from twenty to thirty minutes, according to his feelings, which ought to be comfortable on his coming out. A gentle walk or ride should follow it when the weather permits.

Where the warm bath cannot be conveniently obtained, or it fails to be beneficial, tepid sponging should be substituted. The whole surface of the body should be sponged regularly every morning with tepid water, the patient rubbing himself dry

after it with a coarse towel. This is a very refreshing and salutary practice.

The internal use of the warm waters of Buxton and Bath are occasionally of great service. They relieve pain and uneasiness in the stomach, and often eminently promote digestion. The late Dr Saunders of London thought highly of tepid water as a remedy in this complaint, and questioned whether drinking the water at the celebrated springs of Buxton would, upon trial, be found more efficacious in these complaints, than the regular use of the same quantity of any pure water heated to the same temperature. Those who wish to try it may take a small tumbler-full after dinner and supper. For pain or uneasiness in the stomach, occurring after dinner, or any other solid meal, the addition of a tea-spoonful or a tea-spoonful and a half of strong tincture of ginger to the tepid water will prove of great benefit.

CHAPTER V.

OF TIC DOULOUREUX, NERVOUS DISORDER, &c. AS CONNECTED WITH INDIGESTION.

No enlightened practitioner can long attentively pursue the study and practice of medicine, without being impressed with the great and extensive influence exercised by the digestive functions over other parts of the human frame; indeed, so marked and important is this influence, that there is scarcely a disease, not originating in mechanical injury, which does not own derangement of these functions as its foundation, either in its origin or continuance. Commonly it is the sole foundation both of acute and chronic complaints; while the smaller number which have had another origin, are still so greatly dependent on the integrity of these functions for their perfect removal, that when this fact is overlooked, it often becomes the source of a protracted cure. If therefore we were about to treat, as a late author (Dr Uwins) has proposed to himself, of the diseases either directly or indirectly connected with indigestion, we should be proposing to ourselves a most arduous task, as it would in reality be to treat of almost all the maladies incident

to the body. It is consequently not my intention to enter here on any such undertaking, but I have a few remarks to offer on the subjects of *tic douloureux, nervous disorder, gout, and fulness of blood in the head*, which it is hoped may not be unacceptable to my readers.

Fifty years ago *tic douloureux* was almost unknown; now it is frequently met with. I do not see how there can consistently be more than one opinion, on the subject of its nature and origin, for it is to me evident, that it has grown with the growth of stomachic and intestinal irritation, and strengthened with their strength. Yet some physicians appear disposed to regard it almost as an independent affection, founded in some peculiar disease of the teeth, or nerves. Opinions lead to practice, and they are no further deserving of notice than as they tend to practical results, good or bad. Now if a practitioner considers this malady to be, for the most part, depending on the irritation of a diseased tooth or gum, or of the nerve affected, it necessarily follows that his practice will correspond with his sentiments, and thus, in my opinion, his patient will greatly suffer from the employment of inappropriate and inefficient means. That local irritation of a nerve may occasionally be the cause of tic douloureux, no one will deny, but that it is internal disorder, which is the ordinary cause of the malady, is equally certain. All the cases of tic douloureux which I have seen or

heard of, had great disorder of the general health most evident.

Therefore, local means of relief will in this disorder be very generally altogether unavailing, and those only can succeed which are calculated to fulfil the general indications noticed in the last chapter, as those which directly tend perfectly and permanently to restore the patient's general health, when the morbid sensibility of the nervous system, giving rise to this peculiar affection will cease. Although the influence of severe derangement in the digestive organs, in producing excessive nervous irritation and pain is so evident, yet I have been frequently greatly surprised at the slight consideration given to this fact, by respectable professional men. They have taken different views respecting the origin and proper treatment of the cases of tic douloureux on which they were consulted, but all (to whom I refer) have tacitly agreed on the point, in the rejection of which alone, they assuredly ought not to have differed—that of overlooking the fact just mentioned. It is from this cause that so many of such patients fail to gain the relief which medical aid is capable of affording them, for although iron, quinine, &c. are very valuable remedies in many instances of the present affection, they cannot reasonably be expected to succeed in all, or even the majority, any more than that they should be attended with success in the majority of dyspeptic affections. There is likewise a middle path taken by many persons, in reference

to the management of this disease, in which it is treated as in a measure dependent on the internal derangement explained above, the treatment being partially conducted on this principle. The relief gained is consequently also partial. The reason of this is, that in aggravated cases (and this remark is applicable to all diseases), we often find that it is only by a corresponding close attention to the foundation of the malady, and by following up undeviatingly the advantages gained by such attention, that we can succeed in their perfect removal. This is a point worthy of much regard, for I have seen many patients suffer long and severely, from a neglect of it.

I have no intention of offering here any particular treatment for this very painful malady. Cases of tic douloureux differ much from one another, perhaps as greatly as cases of indigestion, and in its details the treatment must ever be left to the judgment of the practitioner, guided by the principles I have endeavoured to lay down.

The preceding remarks are equally applicable to the nature and treatment of Nervous Disorder and Gout. They are both founded in derangement and weakness, or oppression of the assimilating organs, and therefore the most effectual mode of treatment is invariably that which most speedily and perfectly removes this disorder and oppression. I now notice these complaints solely with the view of impressing on the reader's mind, the absolute necessity of an unreserved and continued attention to

the principles above described, in order to their perfect cure. It is surprising what gratifying and unexpected changes are often wrought in the gouty man's condition, by such a cordial and unreserved attention. For want of it many become martyrs to gout or nervousness, who really have the means of perfect restoration within their reach.*

* I yesterday heard of an elderly gentleman, who had received the most gratifying relief in gout, from taking soda, by the advice of a surgeon in the country. This gentleman had started on a journey, but finding the gout coming on, he returned home, and sent for his surgeon. He was advised to take soda freely (in what way I dont know), with the view of improving the state of the stomach; which most unexpectedly put an end to the gout and he was almost immediately enabled to proceed on his journey. The patient thought it marvellous, and is so publishing the extraordinary virtues of soda wherever he goes, that some think the surgeon may make his fortune by the patients flocking to him from this recommendation. The circumstances connected with this affair clearly illustrate an error too common among both patients and practitioners, and which it has been my endeavour in the preceding pages to guard them against—namely, that of overlooking principles, and dwelling on insulated facts. Soda is no doubt sometimes a valuable medicine in gout, and the old gentleman referred to happened to find it peculiarly efficacious at the time he took it; but certainly the generality of patients will not find it so useful, and he himself may probably be disappointed in its operation the next time he takes it. It is natural for the patient, who has received signal benefit from a particular medicine, to extol it above its merits, but the practitioner ought not to be thus deceived. He ought to be influenced only by *principle*, and then he will find himself capable of being generally useful to his patients; while those, who lie at the mercy of insulated facts, only *happen* occasionally to strike the mark they aim at.

[We cannot withhold an expression of our most cordial assent to the views and opinions embraced in this most valuable note.—*Edit.*]

Fulness of blood in the head is a symptom which is often found in persons suffering from indigestion, especially in the young and plethoric, and it is one liable to prove very troublesome. That the circulation should often be disturbed by disorder of the assimilating functions, cannot appear at all surprising, when we recollect how marked an influence these functions have over every other part of the frame; and that an undue influx of blood to the head particularly should result from this disorder, is no more than we might reasonably expect, from the close connexion existing between that part and the stomach, and the very large proportion of blood sent constantly to the brain, by the internal carotid and vertebral arteries,—a quantity perhaps correctly calculated at nearly one-tenth of the whole mass.*

This symptom not unfrequently proves very incorrigible, but I am constrained to say, that this is a state which ought not to be, provided the patient will adopt the use of proper measures. It has always appeared to me, that the reason why it so commonly proves difficult of cure is, because blood-letting, blistering, and purging, the means usually employed for its removal, are unsuitable and inefficient. Indeed, they are not only inappropriate and ineffectual, but they too often increase the evil they were designed to remove, an effect

* Some physiologists reckon it at one-eighth of the whole mass of blood.

that might be anticipated, if the general principles of treatment explained in the last chapter are correct. For they teach us not only studiously to avoid every expedient which is either directly or indirectly debilitating, but also as constantly to employ measures of an opposite character, that is, those which are capable of imparting strength generally and locally. Now it is certain that blood-letting and purging cannot ordinarily augment the strength of an individual. Then why, it may be asked, are they commonly resorted to in the present case? The source of this error has been pointed out at the 108th, and following pages. It lies in the foundation, or cause of this symptom, which is debility, being disregarded.

Since debility and disorder is the cause of this, and almost all other undue determinations of blood to particular structures, I therefore strongly object to the abstraction of this fluid for their cure, and also to the use of purgatives. The principles on which they are used appear to me erroneous, and the results of the practice are, according to my observation, almost uniformly bad. I have repeatedly seen such local congestions of blood removed, by acting on the invigorating principles already so often adverted to, which were scarcely relieved for a time, by the measures above objected against. This is equally true of the symptom as occurring in young plethoric habits, and in those where debility was well marked. Nevertheless, I do not wish it to be understood, that I object to cautious local

bleeding in such cases under all circumstances; on the contrary, I believe there may be instances, in which a small bleeding or two may be practised with advantage. These cases are, however, comparatively rare.

In weakly persons I would recommend for the cure of this symptom, tonics, especially mineral tonics, and very mild aperients, with the general diet and regimen detailed in the fourth chapter. For young full habits, mercurial alteratives, combined with a full dose of tartarized antimony, a correct diet, and daily active exercise. Mineral tonics will sometimes be very useful here also; even arsenic may occasionally be given with admirable effect. The curative power of exercise is very great, but it requires to be followed up with energy. A man under the active exercises of the training system, soon loses all giddiness and fulness in the head.

APPENDIX

BY THE AMERICAN EDITOR.

For a few years past, medical and even popular writers have found so fruitful a topic in dyspepsia, that we have been greeted with something new upon it almost daily. A treatise on the subject over which but a few months may have passed, must therefore appear somewhat in the back ground, unless special means have been applied to bring it forward. Regarding the preceding publication as peculiarly valuable, more especially so to our medical brethren, we design to remedy in some degree the deficiency alluded to by superadding to it the latest intelligence upon the subject, such at least as appears to us most interesting either from its novelty or intrinsic value. We shall begin by noticing a little volume lately published by Dr Avery of New York with the title of the Dyspeptic's Monitor, which recommends itself by many sensible views, especially those relating to regimen.

The writer appears to have had very ample opportunities of acquiring information upon the subject of which he treats, for he tells us that having long been a prey to distressing symptoms of

dyspepsia, over which medicine seemed to possess little or no control, he left an extensive country practice, crossed the Atlantic, and spent some time in visiting different parts of Great Britain and the Continent, collecting all the information in his power in regard to the ailments with which he was afflicted.

Dr Avery divides dyspepsia into three species, though stages, we think, would have been the most proper designation, as the symptoms which mark them follow each other in train as the morbid irritation extends itself from its primitive seat to involve other parts. The first derangement ordinarily observed, is confined to the gastric functions proper, without any material disturbance in those of the other abdominal viscera: The second includes affections of other portions of the intestinal canal, accompanied by what are often denominated bilious symptoms: The third, a morbid sensibility or irritability of the lining membrane of the stomach and bowels, attended with sympathetic derangements of the liver, nervous system, &c. Now all these we regard as consecutive stages, the last being necessarily attendant on the second, and this again upon the first. We of course except those cases of disorder of the digestive functions consequent upon lesions of other organs, such for instance as those of the liver and spleen.

Dr Avery refers the symptoms of his second species to a vitiated condition of the bile without, as we think, sufficient grounds. Either the effect

may be mistaken by him for the cause, or, what is still more probable, that which he denominates "tenacious, ropy bile," is more properly what the pathologists of the physiological school would consider an altered secretion from a mucous membrane in a state of disease.

The pages which treat of the causes of indigestion contain many sensible though not very novel remarks. Some of these are particularly applicable to patients in this country. He strongly reprobates the mode of living common in the United States, and ascribes the greater prevalence of dyspepsia here than in Europe chiefly to our very variable climate and the inordinate consumption of animal food. He inveighs particularly against our hearty mode of breakfasting, which he says is equivalent to dining in England, and expresses his conviction that it occasions more weak stomachs than can be well imagined. The labourer who has risen early and spent some three or four hours in active employment, may feel no inconvenience from the practice, but with those who lead sedentary or inactive lives, early and full breakfasting cannot be long continued with impunity. He argues that there is no necessity for nourishment until the energy accumulated during sleep is partially exhausted by exercise, and considers the feeling of appetite as the criterion by which the stomach is known to be in a condition to discharge its functions properly. The doctor's sketch of an American breakfast was doubtless intended as a carica-

ture. It must be confessed that in steam boats, public inns and boarding houses, the *a la fourchette* system is carried pretty far, but the tables of respectable private families exhibit much more moderation and good taste. We are moreover somewhat heterodox in regard to the doctor's notions of the sad effects of breakfasting. It is well known, that in the good olden time, before dyspepsia came into fashion, even the court ladies breakfasted upon beef, ale and such like substantial fare. We would not however be understood as advocating unlimited indulgence in breakfasting, being in favour of moderate meals on all occasions.

Dr Avery inveighs also, and we think very properly, against the habitual use of spirituous liquors and their usual accompaniment, tobacco, as fruitful sources of indigestion. We are almost ashamed to acknowledge that we are the only civilized nation who do not regard the practice of chewing tobacco as exceedingly vulgar. If, however, we are not greatly deceived, the use of tobacco is rapidly declining among those who pay the least regard to the proprieties of life. Cigars are now scarcely ever introduced at private dinner parties after the ladies have retired, as was the common practice but a few years since.

The transient vigour imparted to the stomach by alcoholic drinks when taken after a meal, has often led to their habitual use by persons with weak powers of digestion. This is indeed a very prevalent vice, and cannot be too strongly reproba-

ted. The frequent application of all unnatural stimulants necessarily leads to derangements of the natural functions, and we entirely agree with Dr Avery in the opinion that, though the stomach may at first be goaded on by them to vigorous exertions, it must finally be wearied out and sink into languor and torpidity, and we may add, what is still worse, driven into inflammation which may terminate in disorganization. The effects of spirituous liquors taken when the stomach is empty, are even more immediately injurious than when taken with the food.

As to the treatment of dyspepsia, the author of the "Monitor" agrees with Dr Graham, and we believe all others who have had much to do with the disease, in regarding the exhibition of medicines as but a secondary consideration, since, without a proper diet, no permanent advantage is to be looked for. The impaired tone of the stomach cannot be recovered unless by the removal of one of the most frequent causes leading to it, namely, the habit of overloading it. Food should never be taken without a natural appetite, and the stomach is never to be forced when it shows no voluntary inclination. Great care must at the same time be observed, to restrain that morbid craving for food which so frequently proceeds from corroding acidity or other causes, and constitutes a great annoyance to the dyspeptic.

In cases attended with great acidity, many authorities have united in recommending a diet

composed almost exclusively of animal food. "All vegetables," says Dr Paris, "should be withdrawn and a diet of animal food substituted." This recommendation, which has always appeared to us highly inconsistent and injudicious, we are very glad to find condemned by Dr Avery, whose conclusion, that the stomach bears that kind of food best which excites it least and requires the shortest time for its digestion, accords altogether with our own observation. Bread, milk, rice and such like articles, will, we are confident, be generally found to check the redundancy of acidity which would most probably be kept up by a diet of the most tender and digestible animal food. The bread taken with milk or any other fluid nourishment, should be plain and stale. It must not be broken into the liquid, but chewed separately in its dry state, so that it shall be well mixed with the saliva. We have been long in the practice of laying particular stress upon this last direction. In the early stages of dyspepsia a milk diet will generally be found extremely beneficial, and those who cannot take it at first without considerable inconvenience, will, after a few days' perseverance, find it not only to suit their stomachs, but become agreeable to the taste. About half a pint will do for breakfast, and, should the appetite call for it, a similar quantity for supper. At dinner it may generally be eaten as freely as desired, provided the stomach be not oppressed or feel too much distended. Both tea and coffee should, if possible, be avoided. If weak,

Dr Avery thinks that, like all hot drinks, they prove debilitating to the stomach, whereas if strong, they irritate its nerves, and give rise to a secretion of thin mucous and subsequent acidity.

In cases not so aggravated as to render animal food altogether improper, a small piece of boiled mutton, roast beef, or boiled fowl may be eaten at dinner. Mutton is thought to be most easily digested when taken cold. The fatty parts should always be avoided. Boiled rice or stale bread are the most suitable accompaniments, and no more drink should be taken than is actually required, water or milk being the most proper, and those in small quantities at a time. This plan should be persisted in until the stomach will bear a more liberal allowance without unpleasant feelings. Indulgence in fruits is very properly proscribed by Dr Avery. Such dyspeptics as can partake of them at all, must limit themselves to a very moderate quantity of such as are ripe and most wholesome.

For the purpose of neutralizing the acid, which is often a very troublesome accompaniment of this stage, Dr Avery recommends, in addition to a well regulated diet, the employment of magnesia, prepared chalk and the alkalies, and more especially the carbonate of soda. Whenever there is a sensation of gnawing at the stomach, a copious flow of saliva, flatulency and other symptoms of acidity about a teaspoonful of the carbonate of soda may be taken, dissolved in half a tumbler full of water,

and repeated as frequently as the symptoms shall render it necessary. From a trial of both articles, we should prefer the alkaline solution mentioned in the preceding part of this treatise. Nevertheless we have known good effects from the carbonate and bicarbonate of soda. They are far more agreeable to the palate than the carbonates of potash. The lozenges prepared of the bicarbonate of soda constitute a very convenient and agreeable form of employing the medicine. Those sold in the French shops under the name of D'Arcet's alkaline digestive pastils, have long enjoyed very high celebrity. They contain about five per cent of the bicarbonate, to ninety five of sugar, united by means of mucilage of gum tragacanth and flavoured with a very minute quantity of essence of mint.

For the relief of certain symptoms supposed to proceed from biliary derangement, such as restlessness at night, disposition to doze through the day, weariness in the back and limbs, Dr Avery recommends a perseverance in the use of cathartics till the symptoms shall have disappeared. As these symptoms occur so frequently without being associated with any such derangements, this and other reasons that could be assigned, induce us to think the advice injudicious. That it is at variance with the views maintained in the preceding treatise, is very evident.

In the treatment of the second species, or, as we would call it, stage of dyspepsia, which, as we have already said, is characterized by a long train of symptoms ordinarily denominated bilious, such as

yellowness of the tongue in the morning, bitter taste, sallowness of complexion, &c. &c., his efforts are not only directed to the regulation of the stomach, but likewise of the bowels and liver. The diet which he considers best suited to the stomach and least likely to promote irritation in the liver, is that already mentioned, consisting of one or other of the farinacea, but more especially oat meal gruel, which may in general be taken without dislike for a longer time than any thing else of the kind. From half a pint to a pint of this, seasoned with a little salt, or sugar, and sometimes a very little nutmeg, may be taken three times a day. Should the too frequent use of this occasion any dislike, it may occasionally be omitted, and arrow root, rice water, or Indian meal gruel substituted. The patient is exhorted not to be alarmed at the apparently scanty allowance proposed, since it may be strictly persevered in for weeks with none but the happiest effects. A little milk may be sometimes added to the gruel, but this is only admissible under peculiar circumstances, as for example, where exercise is taken in the open air. Individuals who can avail themselves of these last advantages may dine on oatmeal gruel, and if they choose, breakfast and sup upon a piece of stale bread, toasted or not, as they like, with a cup of very weak black tea. Among the means recommended by Dr Avery for obviating or correcting a confined state of the bowels, an inconvenience so commonly complained of by dyspeptics and most persons who lead sedentary

lives, is the bread of unbolted flour, or what he regards as still better, rye bread. But the article which he thinks will least frequently disappoint expectation is a thin mush made of rye flour, to be eaten once or twice a day with molasses. He likewise recommends an injection of half a pint of cold water to be used every day just before visiting the water closet. We think the quantity of fluid here mentioned rather larger than necessary, one or two ounces thrown up by means of a small syringe generally answering every purpose. Observation has taught us to regard this as one of the most convenient and best means that can be resorted to for obviating costiveness arising from a sedentary life. It is especially adapted to cases attended with those sensations of itching and crawling at the extremity of the bowel which are sometimes so annoying.

In a treatise under the title of "Pathological and Practical Researches on Diseases of the Stomach, the Intestinal Canal, the Liver, and other Viscera of the Abdomen," by Dr John Abercrombie of Edinburgh,* we find, among much other valuable matter, some sensible remarks in relation to dyspeptic complaints. Of these he recognizes as the least conjectural, first, a form originating from deficiency of action in the muscular coat, occasioning too long a detention of the alimentary matters followed by imperfect changes and chemical decompositions: Secondly, a form arising from an irrita-

* Edinburgh, 1828, pp. 396, 8vo.

ble state of the mucous membrane, leading to excitement of the muscular coat, and producing an evil precisely the reverse of that just mentioned, namely, either speedy rejection of the food by vomiting, or its propulsion downwards in an imperfectly digested state: And thirdly, a form in which there is deficiency in the quantity, or alteration in the qualities of the fluids of the stomach.

Among the most important views presented by Dr Abercrombie on this topic are the following: Considering the muscular action of the stomach as more vigorous when the contents of this organ are in smaller quantity than where there is much distention, and supposing that the secretions are regulated by the quantity of ingesta they have to act upon, he lays it down as a first and great principle in the treatment of indigestion, that the quantity of food should be so restricted that no more be taken than the stomach is found capable of digesting in a healthy manner. If it is found that the digestive process is carried on slowly, particular care should be observed not to take additional food until full time has been allowed for the solution of the former. For example, if the healthy period be ascertained to be four or five hours, the dyspeptic should allow six or seven. This is one of our author's golden rules, by no means to be infringed upon, and it perfectly accords with the views maintained in the preceding treatise. The quantity of the articles taken as food, though usually regarded as the most essential consideration in the

treatment of dyspepsia, Dr Abercrombie thinks of minor importance when compared to quantity. He believes, in fact, that the dyspeptic might be almost regardless of any attention to the quality of his diet, if he rigidly observed the necessary restrictions as to quantity. He at the same time disapproves of a mixed diet. "It is often remarkable," says he, "how articles which cannot be borne as a part of mixed diet, agree perfectly when taken alone; how a person, for example, who fancies that milk disagrees with him, will enjoy sound digestion upon a milk diet, and how another, who cannot taste vegetables without being tormented with acidity, will be entirely free from acidity on a vegetable diet."

As one of the chief objects we contemplated in referring to Dr Abercrombie's treatise was to show his pathological views, we shall say nothing of his medical treatment of dyspeptic complaints. We have taken it for granted, here as well as elsewhere, that nearly every thing essential upon this last head, has been anticipated in Dr Graham's treatise. It has appeared to us that the frequent success which has attended the Halsteadean practice of champooing and succussation of the abdomen, tends to support Dr Abercrombie's views in relation to the deficient action of the muscular coat of the stomach and bowels. We do not mean to say that these views furnish a rationale of this lately so famous process, completely satisfactory, but that they go further to elucidate its effects than any others

we have met with in books. It is evident that we are not of the number of those disposed to ridicule and contemn the practice of Mr Halstead, now no longer a secret. On the contrary, we think this gentleman has conferred an obligation upon his countrymen by making them acquainted with an agent known, for the most part, to people of other nations from time immemorial, and the advantages of which, under proper circumstances, it might argue great prejudice or dullness to deny.

The treatment recommended by Dr Graham in dyspeptic cases, attended with pain and soreness of the pit of the stomach, consisting of warm fomentations over that region, with frequent gentle friction, corresponds strikingly with a part of the plan introduced by Mr Halstead.

Dr Graham, as we have seen, conducts his treatment of dyspepsia upon the principle of studiously avoiding every expedient calculated to be either directly or indirectly debilitating, such as bloodletting, purging, &c., and the employment of measures of an opposite character capable of imparting strength both generally and locally. The same view seems to be maintained by Mr Halstead, who never restricted his patients in diet, or enjoined forbearance in any case. On the contrary, the stomach was urged on every day to some new trial of its strength, and the boastful reports made by patients of their gormandizing experiments were listened to with silent approbation. This last practice, so contrary to the dictates of common sense,

and differing so widely from the judicious course of regimen recommended by Dr Graham, must have proved highly injurious to the cause of Mr Halstead, inasmuch as it doubtless often prevented recoveries, aggravated symptoms, and produced relapses. We are speaking of his early practice, when he was in the full tide of experiment, and before the publication of his book, in which we are glad to find a reference made to "the dictates of common sense," and an acknowledgment that hardly any case can be relieved without some attention to diet. He has even gone so far as to lay down three dietetic rules, the first of which is, to *eat slowly;* the second, *to eat moderately;* and the third, *to eat at regular periods.* He dispenses altogether with the employment of internal remedies.

In the preface to his publication, Mr Halstead professes to give a full narrative of the manner in which he was led to adopt his "new method of curing dyspepsia." We would observe, by the way, that this preface of some half dozen pages, is perhaps the only portion of the duodecimo which came from Mr Halstead's pen. The rest, exclusive of the description of the organs and process of digestion, which is acknowledged to be taken from the Library of Useful Knowledge, has undoubtedly been prepared by a professional hand. We shall not of course be suspected of mentioning this in disparagement. The narrative alluded to represents, that having for more than twenty years suf-

fered all the evils of dyspepsia in its most aggravated forms, and exhausted every means of cure he had heard of, without success, he finally had his attention specially directed to the state of extreme hardness and unnatural rigidity of his abdomen, with the increased tension and spasmodic contractions in the abdominal muscles during the paroxysms of the disease. Convinced that a great deal of his distress was somehow or other connected with these conditions, and struck with the relief always obtained from travelling day and night in stages, in which he often slept, he says that he came to the conclusion that during the time he was asleep the abdominal muscles became relaxed and the agitation was communicated to his stomach and bowels in the manner which nature seemed to require for their relief. Satisfied with this reasoning, he next set about devising some means by which he might procure a relaxation of the rigid muscles and give a jolting sort of motion to the stomach and bowels. In accordance with these views, he was led to relax the abdominal muscles during exercise by an exertion of the will, and says that he was thus enabled to derive the full benefit of those exercises which had previously failed in affording any relief. From this it may be inferred that the chances of obtaining advantage from either walking or riding are greatly diminished or entirely lost if the person be maintained in an erect position, in which the abdominal mus-

cles are necessarily in a state of what Mr Halstead denominates, involuntary contraction. That the stomach may receive the agitation so indispensably necessary, a perfect relaxation must be procured, which can only be effected by stooping forward or settling down. How this accords with the notions of those who, in the pursuit of healthy exercise, would not abandon all pretensions to grace, we leave to be determined by the persons whom it may concern. Mr Halstead tells us, however, that after this discovery he soon found that every one had not the same voluntary control over the muscles of the abdomen that he himself had. That these muscles are subject to the will in some but not in others, we must confess sounds to our ears as rather equivocal, since we, and we believe all our professional brethren, have been taught to regard them as appertaining most decidedly to the voluntary class. This discovery, it must be observed, is related in the preface. For the reasons already given, it could not have been expected in any other portion of the book.

After this sketch of the deductive philosophy by which, according to his printed account, Mr Halstead was led to adopt his new mode of curing dyspepsia, we shall attempt to convey some idea of his process. We have alluded to his book account, because we had heard a very different story of its origin previously to his publication.

It has been already stated that Mr Halstead lays particular stress upon the outward condition of the

abdomen. For the purpose of producing relaxation in the abdominal muscles, without which there can be no hope, he advises the external application of warm fomentations, poultices, steaming, &c., to be repeated two or three times a day. He particularly recommends the application, on going to bed, of flannel cloths wrung out of a mixture of equal parts of hot vinegar and water. These should be several times folded so as to retain the warmth and moisture, and sufficiently large to extend from the chest to the hips. Upon this a coarse dry towel may be spread, and then a bottle filled with hot water, or what is still more convenient, a warm flat-iron, passed gently over the whole abdomen for fifteen or twenty minutes. After the removal of the wet cloths, a piece of warm, dry flannel should be substituted. This process may be repeated two or three times a day, and the best time is when the stomach is empty. In this way we are assured the abdomen may generally in a few days, be rendered soft and yielding, the sense of constriction removed, the respiration rendered more free and easy, and the patient made altogether more comfortable. Sometimes, however, a much longer persistence is requisite to produce the desired effects. Should this plan of fomentation be found to occasion exhaustion, it ought to be omitted for a day or two, and on being resumed not continued so long each time. We have read the letter of an American gentleman, detailing the manner in which he was relieved in

Paris from a most inveterate case of dyspepsia. It was of course written prior to Mr Halstead's "discovery." "The only *medication* employed," says the writer, "was *external*, by means of *hot sulphurous baths* every other day, continued from three-quarters of an hour to an hour; *jets or douches of steam*, or hot water, upon the stomach and bowels on alternate days, and a cataplasm of *flaxseed or bread*, applied to the bowels every night."*

The application of poultices, fomentations, &c. in diseased states of the abdominal viscera is in fact as old as the practice of medicine; and in France, especially where the doctrines of Broussais have any influence, it is resorted to in almost every case of dyspepsia. The rationale of this plan of treatment is much more satisfactory as explained by the French authorities than by the one whom we are now considering. The effect produced on the rigid muscles of the abdomen is but partial, and that from which the least benefit is derived. It is by its relaxing effects generally and more particularly by its influence on the skin that it is useful in dyspeptic cases. The intimate connexion subsisting between the functions of the skin and those of the chylopoietic apparatus is well understood by physicians.

The next step in the plan of cure is the communication of a certain mechanical action to the

* Professor Hitchcock's Lectures, Appendix.

stomach, which process comprises the pith and marrow of the "new method." In this operation the patient is usually placed with his back to the wall, having his waistbands loosened and his abdomen without any other covering than a shirt or other thin garment. The operator seated immediately before him, places his hands on the lower margin of the ribs, and with his thumbs or index fingers presses just beneath the breast bone in the pit of the stomach, so as to cover the spot usually possessing the most sensibility. The pressure is to be gradually increased, and should it occasion more uneasiness than can be conveniently borne, may be suspended. Sometimes however there is so much insensibility, that the strongest pressure which can be made by a stout man using all his force gives no pain or uneasiness.

When this is the case recourse is had to sudden tapping or punching with the finger and thumb over the point indicated. This part of the process has received the technical appellation of "*the shock.*" It is to be commenced gently and repeated once or oftener every day until the sensibility be restored. A sudden sensation of pain darting upwards towards the throat or in other parts, as the back and limbs, is often perceived to follow these strokes upon the stomach, and when this happens, it is regarded as a good omen. The more tender the spot pressed upon or punched becomes, the more rapid the cure, and the sensibility once awakened must not be suffered to subside entirely,

but kept up by the patient, who with his finger or thumb is to press upon it with sufficient force and frequency.

As tenderness in epigastrio is one of the most characteristic symptoms of acute inflammation of the stomach, it is easy to conceive that the effects of punching for the purpose of promoting this condition might be attended with very disastrous consequences. This part of the practice we think ought never to be resorted to without the advice of a physician.

The next step in the process is to communicate an impulse to the stomach of a jolting kind, which in the Halsteadean phraseology is called "*the action.*" This is done either by the patient himself or an operator. The last is generally to be preferred, and is effected most conveniently in the following manner. The operator seated on the right of the patient places his right hand firmly upon the lower part of the bowels in such a manner as apparently to get below them, and hold them resting upon the upper edge of his hand. Then by a succession of upward movements he produces a kind of succussation very much like that which takes place on horseback or in a jolting vehicle. This *action* on being kept up for a minute or two commonly produces a sensation of warmth and general excitement, with a feeling at the stomach which has been compared to a slight electric shock. Among the good effects resulting from this process is relief from flatulency when this has been a trou-

blesome symptom. The flatus is expelled by actual mechanical force dexterously applied to each hypochondriac region, which is certainly far better than the common mode of correcting it by internal means, the subsequent effects of which are often highly detrimental. Though the operation may create slight uneasiness or pain at first, it becomes rather pleasant after a few repetitions.

Another method, by which nearly the same effects may be produced, is to place the patient against a wall with his body so inclined as to relax the abdominal muscles, in which position the operator seated before him places his hands upon the abdomen, and pressing firmly makes a quick succession of rubbing motions upwards. In doing this the ends of the fingers are frequently punched under the stomach, so as to give rise to that tender and peculiar sensation which has been mentioned as desirable to produce and promote. This operation may be carried on so that by moving the hands gradually downwards, the succession of small shocks may be imparted to the stomach by impulses made on the lower parts of the abdomen.

When the patient is to operate on himself, he must incline his body forwards so as to favour as much as possible the relaxation of the abdominal muscles. Then placing his hands in a horizontal position in such a manner as that the ends of the fingers may meet just below the pit of the stomach, he inclines the palms upwards, so as to get them, as it were, beneath the stomach, and makes the same

kind of quick upward movement which has been already described. The hands may be applied lower and lower until, as before mentioned, the succussion is communicated to the stomach from the lowermost parts of the abdomen. These several operations are recommended to be continued from one to five minutes each time, and repeated frequently during the day; sometimes indeed, where there is a great degree of torpor, as often as every half hour. It would, we think, be improper to employ these mechanical means immediately after eating, as Dr Avery recommends, and the best time for resorting to them is in general about an hour or two after a meal. The intervals between the applications should be gradually lengthened, so that two or three applications a day may be sufficient, and finally the process may be superseded by other kinds of exercise.

It cannot be denied, that by the means just described, the most salutary effects have been produced in cases of dyspepsia. Those who have undergone or witnessed the process must be satisfied that the agent is one of a most positive character. One who has not had such an exhibition could scarcely believe it possible for the abdominal viscera to bear the mechanical violence, to which they are frequently subjected under the Halsteadean discipline. We have heard of cases where the utmost strength of an uncommonly sturdy man was applied in sudden punches over the pit of the stomach. Some patients in despair

of rousing the sensibilities of their torpid stomachs by the ordinary methods, have even resorted to pushing themselves violently against canes and sticks posted against the wall. And yet we are informed that out of many hundred cases there has not been an instance of injurious effects ensuing. This experience is, we think, calculated to perplex in no small degree the ordinary reasoning of pathologists. That operators possessing no professional knowledge should have gone on so long without encountering cases of supposed dyspepsia depending upon acute inflammation, scirrhous or other organic affections, where these mechanical applications must have inevitably proved detrimental and dangerous, is to be ascribed to nothing short of the most unexampled good fortune.

The influence, which this practice is calculated to produce upon the muscular, nervous, sanguineous and lymphatic capillary systems involved in the various organs of the abdominal cavity, offers a subject for interesting enquiry. As the manual exercise exacted is neither suited to the taste nor leisure of most physicians, it is not at all likely that they will contest the field with the Halsteadean operators, who, should the practice gain a permanent footing, will perhaps be referred to in the same manner as the bleeders, leechers and other subsidiaries of the profession.

We shall conclude our notice of Mr Halstead's practice with some remarks of Dr Avery, in which we entirely concur. "Let not the professed gour-

mand, the idle epicure, nor even the book worm, the accountant, or delicate female, who never exceed one twenty-fourth of their time in active exercise in the open air, flatter themselves that shampooing will enable them to eat with impunity the hearty food that is proper for the labourer only. It may be usefully added to a proper regimen, but is good for nothing without it. In this respect it stands in the same light with every other remedy. To suppose it applicable to all cases of dyspepsia is as absurd as to imagine that any one medicine will cure all diseases. Mustard seed and brandy have both in their turn been considered as specifics. The first is now and then useful, the second never."

During the last year, a work under the title of Dyspepsia Forestalled and Resisted has been published by Professor Hitchcock of Amherst College. It consists of a series of lectures on diet, regimen and employment, delivered to the students of that institution, and embraces a very large fund of information upon those subjects, the result of much observation and extensive research. As might be expected, it will be found more interesting to the general reader than to the physician, and the advocates of moderation and temperance have a zealous and very able advocate in Professor Hitchcock.

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